**Suppl File S4 - Multiple sequence alignment of CEP57L1 orthologs that have a Cterminal DDx3EQ motif**

>Centrosomal\_protein\_CEP57L1|NP\_001077004.1/1-460 centrosomal protein CEP57L1 isoform 1 [Homo sapiens]NP\_001258781.1 centrosomal protein CEP57L1 isoform 1 [Homo sapiens]NP\_001337581.1 centrosomal protein CEP57L1 isoform 1 [Homo sapiens]NP\_001337582.1 centrosomal protein CEP57L1 isoform 1 [Homo sapiens]NP\_776191.1 centrosomal protein CEP57L1 isoform 1 [Homo sapiens]Q8IYX8.1 RecName: Full=Centrosomal protein CEP57L1; AltName: Full=Centrosomal protein 57kDa-like protein 1; AltName: Full=Centrosomal protein of 57 kDa-related protein; Short=Cep57R; AltName: Full=Cep57-related protein [Homo sapiens]ADQ32441.1 chromosome 6 open reading frame 182, partial [synthetic construct]SJX39480.1 unnamed protein product, partial [Human ORFeome Gateway entry vector]AAH33448.1 Chromosome 6 open reading frame 182 [Homo sapiens]AIC53592.1 CEP57L1 [synthetic construct]EAW48366.1 chromosome 6 open reading frame 182, isoform CRA\_f [Homo sapiens]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCIKRRPP

WQICSKFGALPFVAE-------K-------------------------MRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVC--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKNS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>BAF82599.1/1-460 unnamed protein product [Homo sapiens]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAARYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCIKRRPP

WQICSKFGALPFVAE-------K-------------------------MRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-RC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVC--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKNS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_055246713.1/1-463 centrosomal protein CEP57L1 isoform X2 [Gorilla gorilla gorilla]

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----------------------------------------------------------------MKI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKQ---KKKSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K-------------------------MRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TF-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVC--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKNS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_003255595.2/1-460 centrosomal protein CEP57L1 isoform X1 [Nomascus leucogenys]XP\_030665399.1 centrosomal protein CEP57L1 isoform X1 [Nomascus leucogenys]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSLIQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K-------------------------MRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKKTESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVR--KLLQKVQNSKM-SEASGIQQEDSYPRGSKNIKNI--PR

KCLTDTNLFQK-NSSSHPIR-IHNLQMKLRRDDIMWEQ

>XP\_032012140.1/1-460 centrosomal protein CEP57L1 isoform X1 [Hylobates moloch]XP\_058291440.1 centrosomal protein CEP57L1 isoform X1 [Hylobates moloch]XP\_058291441.1 centrosomal protein CEP57L1 isoform X1 [Hylobates moloch]XP\_058291442.1 centrosomal protein CEP57L1 isoform X1 [Hylobates moloch]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFIQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K-------------------------MRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TF-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKKTESHSVC

DDIECELECLLKKMEIKGEQISKVKKHQDSVR--KLLQKVQNSKM-SEASGIQQEDSYPRGSKNIKSI--PR

KCLTDTNLFQK-NSSSHPIR-VHNLQMKLRRDDIMWEQ

>EHH53476.1/1-460 hypothetical protein EGM\_14123 [Macaca fascicularis]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSSKILHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K-------------------------RRQHRG-P--HILQKSFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQQEDSNPKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_011831335.1/1-463 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Mandrillus leucophaeus]

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----------------------------------------------------------------MKI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSSKILHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSK--------------------------KTKCIKRGPP

WRICSKFGALPFVAE-------K-------------------------RRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQQEDSNRKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_011808205.1/1-463 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Colobus angolensis palliatus]

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----------------------------------------------------------------MKI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RI-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K-------------------------RRQHRG-P--HILQKPFNVAETGC

LPR----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQESVR--KLQQKVQNSKM-SEASGIQQEDSNPKGSKNIKHS--LR

KCLTDTSLFQK-NRSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_054413950.1/1-490 centrosomal protein CEP57L1 isoform X4 [Pongo abelii]

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----------------MEEWYNAT--------------------------------------ELSKI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVQSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHFKE---RKKSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAR-CSVNASM-QNFLQMRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSIEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKNS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_054413949.1/1-492 centrosomal protein CEP57L1 isoform X3 [Pongo abelii]

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----------------------------------------------------MIHL-P--------------

-------Q-PLKVLG-------------------------------------------------LEI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVQSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHFKE---RKKSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAR-CSVNASM-QNFLQMRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSIEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKNS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>KAI4019342.1/1-477 centrosomal protein 57 like 1 [Homo sapiens]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCIKRRPP

WQICSKFGALPFVAE-------K------STSAS-CSVNASM-QNFLQMRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-RC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVC--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKNS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>NP\_001337585.1/1-477 centrosomal protein CEP57L1 isoform 9 [Homo sapiens]KAI2543356.1 centrosomal protein 57 like 1 [Homo sapiens]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCIKRRPP

WQICSKFGALPFVAE-------K------STSAS-CSVNASM-QNFLQMRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVC--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKNS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_055116857.1/1-477 centrosomal protein CEP57L1 isoform X1 [Symphalangus syndactylus]XP\_055116872.1 centrosomal protein CEP57L1 isoform X1 [Symphalangus syndactylus]XP\_055116878.1 centrosomal protein CEP57L1 isoform X1 [Symphalangus syndactylus]XP\_055116888.1 centrosomal protein CEP57L1 isoform X1 [Symphalangus syndactylus]XP\_055116896.1 centrosomal protein CEP57L1 isoform X1 [Symphalangus syndactylus]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFIQNEPS------QNCR--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAS-CSVNASM-QNFLQMRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKKTESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVR--KLLQKVQNSKM-SEASGIQQEDSYPRGSKNIKNI--PR

KCLTDTNLFQK-NSSSHPIR-VHNLQMKLRRDDIMWEQ

>XP\_030784049.1/1-492 centrosomal protein CEP57L1 isoform X1 [Rhinopithecus roxellana]

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-------R-RRS----LSPVLE------------------------------------------SQI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSRETAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKQ---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------FTSAN-CSVNASM-QNLLQRRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPPDSEKSISISDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHEESVR--KLQQKVQNSKM-SEASGIQQEDSNPKGSKNIKHS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_033090695.1/1-492 centrosomal protein CEP57L1 isoform X1 [Trachypithecus francoisi]XP\_033090696.1 centrosomal protein CEP57L1 isoform X1 [Trachypithecus francoisi]XP\_033090697.1 centrosomal protein CEP57L1 isoform X1 [Trachypithecus francoisi]

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--------------------------------------------------------MP--------------

-------R-RRS----LSPVLE------------------------------------------SQI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAN-CSVNASM-QNLLQRRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-SS-WC-KAIPPDSEKSISISDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQESVR--KLQQKVQNSKM-SEASGIQQEDSNPKGSKNIKHS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_011757193.1/1-477 centrosomal protein CEP57L1 isoform X1 [Macaca nemestrina]XP\_011757194.1 centrosomal protein CEP57L1 isoform X1 [Macaca nemestrina]XP\_011757195.1 centrosomal protein CEP57L1 isoform X1 [Macaca nemestrina]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSSKILHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAN-CSVNASM-QNLLQRRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQQEDSNPKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_025237730.1/1-477 centrosomal protein CEP57L1 isoform X3 [Theropithecus gelada]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSSKILHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAN-CSVNASM-QNLLQRRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISIFDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGVQQEDSNPKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_045247621.1/1-479 centrosomal protein CEP57L1 isoform X2 [Macaca fascicularis]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSSKILHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAN-CSVSASM-QNLLQRRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQQEDSNPKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_050645103.1/1-479 centrosomal protein CEP57L1 isoform X2 [Macaca thibetana thibetana]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSSKILHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHFKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAN-CSVNASM-QNLLQRRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQQEDSNPKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_009204582.2/1-487 centrosomal protein CEP57L1 isoform X1 [Papio anubis]XP\_011905828.1 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Cercocebus atys]

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-------L-HS------SP---------------------------------------------AQI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSSKILHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAN-CSVNASM-QNLLQRRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGVQQEDSNPKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_028702525.1/1-487 centrosomal protein CEP57L1 isoform X1 [Macaca mulatta]XP\_050645102.1 centrosomal protein CEP57L1 isoform X1 [Macaca thibetana thibetana]

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--------------------------------------------------------MP--------------

-------L-HS------SL---------------------------------------------AQI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSSKILHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHFKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAN-CSVNASM-QNLLQRRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQQEDSNPKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_045247620.1/1-487 centrosomal protein CEP57L1 isoform X1 [Macaca fascicularis]

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--------------------------------------------------------MP--------------

-------L-HS------SL---------------------------------------------AQI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSSKILHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAN-CSVSASM-QNLLQRRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQQEDSNPKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_008005587.1/1-487 centrosomal protein CEP57L1 isoform X1 [Chlorocebus sabaeus]

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--------------------------------------------------------MP--------------

-------L-HS------SP---------------------------------------------AQI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCQ--PA-----NLEVTSSKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAN-CSVNASM-QNLLQRRQHRG-P--HILQKAFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-REASGIQQEDSNPKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>NP\_001337583.1/1-477 centrosomal protein CEP57L1 isoform 3 [Homo sapiens]NP\_001337584.1 centrosomal protein CEP57L1 isoform 3 [Homo sapiens]NP\_001337586.1 centrosomal protein CEP57L1 isoform 3 [Homo sapiens]NP\_001337587.1 centrosomal protein CEP57L1 isoform 3 [Homo sapiens]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCIKRRPP

WQICSKFGALPFVAE-------K------VRGDK-MKIVVQK-NSCFVMRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVC--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKNS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_024213116.1/1-480 centrosomal protein CEP57L1 isoform X10 [Pan troglodytes]

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----------------------------------------------------------------MKI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIRRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCIKRRPP

WQICSKFGALPFVAE-------K------VRGDK-MKIVVQK-NSCFVMRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVC--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKHS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_054542842.1/1-486 centrosomal protein CEP57L1 isoform X6 [Pan troglodytes]

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--------------------------------------------------MVAFYL----------------

----------------------------------------------------------------SQI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIRRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCIKRRPP

WQICSKFGALPFVAE-------K------VRGDK-MKIVVQK-NSCFVMRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVC--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKHS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_025237731.1/1-479 centrosomal protein CEP57L1 isoform X4 [Theropithecus gelada]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSSKILHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------VRGDK-MKIVVQK-NSCFIRRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISIFDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGVQQEDSNPKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_025237728.1/1-480 centrosomal protein CEP57L1 isoform X1 [Theropithecus gelada]

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----------------------------------------------------------------MKI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSSKILHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------VRGDK-MKIVVQK-NSCFIRRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISIFDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGVQQEDSNPKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_026310193.1/1-505 centrosomal protein CEP57L1 isoform X1 [Piliocolobus tephrosceles]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSKDIWSPAWWLMPVIPTVWEAKASASFEKTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAN-CSVNASM-QNLLQRRQHRG-P--PILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQESVC--KLQQKVQNSKM-SEASGIQQEDSNPKGSKNIKHS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_009450074.2/1-498 centrosomal protein CEP57L1 isoform X5 [Pan troglodytes]XP\_054969999.1 centrosomal protein CEP57L1 isoform X1 [Pan paniscus]

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-----------------------------------------------MRDCELGQAL---------------

--------------------------------------------------PEALSLRP--------------

-------E-AVSVPGRLDSVLEKG--------------------------------------K-EKI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIRRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCIKRRPP

WQICSKFGALPFVAE-------K-------------------------MRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVC--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKHS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_018885257.3/1-498 centrosomal protein CEP57L1 isoform X1 [Gorilla gorilla gorilla]

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-----------------------------------------------MRDCELGQAP---------------

--------------------------------------------------PEALSLRP--------------

-------E-AVSVPGLLDSVLEKG--------------------------------------K-EKI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKQ---KKKSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K-------------------------MRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TF-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVC--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKNS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_054413947.1/1-515 centrosomal protein CEP57L1 isoform X1 [Pongo abelii]

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-----------------------------------------------MRDCELGQAP---------------

--------------------------------------------------PEALSLRP--------------

-------E-AVSVPGRLESVLEKG--------------------------------------K-EKI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVQSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHFKE---RKKSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAR-CSVNASM-QNFLQMRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSIEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKNS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_054346002.1/1-515 centrosomal protein CEP57L1 isoform X2 [Pongo pygmaeus]

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-----------------------------------------------MRDCELGQAP---------------

--------------------------------------------------PEALSLRP--------------

-------E-AVSVPGRLESVLEKG--------------------------------------K-EKI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVHSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHFKE---RKKSSK--------------------------KTKCIQRGPP

WQICSKFGALPFVAE-------K------STSAR-CSVNASM-QNFLQMRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSIEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKNS--PR

KCLTDTNLFQK-NSSFHPIR-VRNLQMKLRRDDIMWEQ

>XP\_008993125.3/1-462 centrosomal protein CEP57L1 isoform X3 [Callithrix jacchus]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYRKPP----

-E-------RV-FVPSFTKNESS------QNCH--PA-----NLEVTSSKIIHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNTLSKEAAQYKKALENETNERNLAHQELIKQKKDISVQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDEMKLYAKLEKLDVLEKECFRLTATQKTAEDKIKYLEERLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCVKRGSP

RQVCSKFGALPFVAE-------K-------------------------MRQHRG-P--HILQKSSNETEPIC

LPK----PSRT-TS-WC-KAIPTDSEKSISICDNLSELLMAMQDELDQMSVEHQE---LLKQMKETESHSVF

NDIECELECLVKKMEIKGTQISKLKKHQDSVR--KLQQKVQNSKM-SKASGIQQEGSNPKGSRNIKNS--PR

KCLTDTNLFQK-NSSFHPIP-VHNLQVKLRRDDIMWEQ

>XP\_032130971.1/1-460 centrosomal protein CEP57L1 isoform X1 [Sapajus apella]XP\_032130972.1 centrosomal protein CEP57L1 isoform X1 [Sapajus apella]XP\_032130973.1 centrosomal protein CEP57L1 isoform X1 [Sapajus apella]XP\_032130974.1 centrosomal protein CEP57L1 isoform X1 [Sapajus apella]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNESS------QNCH--PA-----NLEVTSSKILHSPN-------SP-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSKEAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDEMKLYAKLEKLDVLEKECFRLTATQKTAEDKIKYLEERLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCVKRGPP

RQICSKFGALPFVAE-------K-------------------------MRQHRG-P--HILQKSSNETEPRC

LPK----PSRT-TS-WC-KAIPTDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

NDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SKASGIQQEGSDLKGSRNIKNS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQVKLRRDDIMWEQ

>XP\_017352877.1/1-460 centrosomal protein CEP57L1 isoform X1 [Cebus imitator]XP\_017352878.1 centrosomal protein CEP57L1 isoform X1 [Cebus imitator]XP\_017352879.1 centrosomal protein CEP57L1 isoform X1 [Cebus imitator]XP\_037583358.1 centrosomal protein CEP57L1 isoform X1 [Cebus imitator]

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-----------------------------------------------MDSKLMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNESS------QNCH--PA-----NLEVTSSKILHSPN-------SP-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSKEAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKGQDEMKLYAKLEKLDVLEKECFRLTATQKTAEDKIKYLEERLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCVKRGPP

RQICSKFGALPFVAE-------K-------------------------MRQHRG-P--HILQKSSNETEPRC

LPK----SSRT-TS-WC-KAIPTDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

NDIECELECLVKKMEIKGEQISKLKKHQDSVC--KLQQKVQNSKM-SKASGIQQEGSDLKGSRNIKNS--PR

KCLTDTNLFQK-NSTFHPIR-VHNLQVKLRRDDIMWEQ

>XP\_012293822.1/1-462 centrosomal protein CEP57L1 isoform X4 [Aotus nancymaae]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-K-------RV-FVPSFTENESS------QNCH--PA-----NLEVTSSKILHSPN-------SP-------

-------ALILALKTLQEKIHRLELERTQAEDNLNTLSIEAARYKKALENETNERNLAHQELMKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDEMKLYAKLEKLDILEKECFRLTATQKTAEDKIKYLEERLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCVKRGPP

RQICSKFGALPFVAE-------K-------------------------MRQHRG-P--HILQKSSNETEPRC

LPK----PSRT-TS-WC-KAIPTDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

NDIECELECLIKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SKASGIQQEGSSPKGSRNIKNS--PR

KCLTDTNLFQK-NNSFHPIR-VHNLQVKLRRDDIMWEQ

>XP\_039323313.1/1-475 centrosomal protein CEP57L1 isoform X1 [Saimiri boliviensis boliviensis]

-------------------------------MICL-------------------PQP---------------

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--------------PKVL------------------------------------------------------

--------------------------------------------------------------G-LQI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNESS------QNCH--PA-----NLEVTSSKILHSPN-------SP-------

-------ALILALKTLQEKIHRLELERTQAEDNLNTLSKEAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDEIKLYAKLEKLDVLEKECFRLTATQKTAEDKIKYLEERLKEEEHQRKLFQD

KASELQTGLEISKILMSSVSNLKHSKE---KKKSSK--------------------------KTKCVKRGPP

GQICSKFGALPFVAG-------K-------------------------MRQHRG-P--HILQKSSNETEPRC

LPK----PSRT-TS-WC-KAIHTDSERSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSMC

NDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SKASGIQQEGSKPKGSRSVKNS--PR

KCLTDTNLFQK-NNSFHPIR-VHNLQVKLRRDDIMWEQ

>XP\_015304030.1/1-448 PREDICTED: centrosomal protein CEP57L1 isoform X3 [Macaca fascicularis]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSSKILHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASE----------------------------------------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K------STSAN-CSVNASM-QNLLQRRQHRG-P--HILQKSFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQQEDSNPKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIQ-VHNLQMKLRRDDIMWEQ

>XP\_008575469.1/1-476 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Galeopterus variegatus]

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-----------------------------------------------MDTELMHSIV----GSYLKPP----

-E-------RV-FVPSFTQHESS------QNCH--PV-----NSEVISPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEIETNERNLAHEELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKILMSSVSNPKHSKE---KRKSSK--------------------------KAKCLNRGPP

QQIYSKFGALPFVAE-------K------FASAG-CSVNASM-QSLLQMTQHRG-S--HTLQKP-EVTKPRC

LYK----PTRT-TS-QF-KAVPSDSKVSISICDNLSELLMAMQDELDQMSVEHQE---LLKQMKETESHSVC

DDIECELEHLVKKMEIKGEQISKLKKHQVSVR--KLQQKVQNSKM-SETSGIRQEDSNPKGSKNIKNS--PR

KCLSETNPFQK-NSDFRPIQ-VHNLQVKLRRDDIMWEQ

>XP\_012506624.1/1-460 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Propithecus coquereli]

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-----------------------------------------------MNSELMHSVV----GSYLKPP----

-E-------RM-FVPSFTQNESS------QNRQ--PM-----NLEVTSSKVFHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKEISMQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMRLHAKLEKLDVLEKECFRLTATQKAAEDKIKHLEEKLTEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKQSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGALPFVSE-------K-------------------------MMQHCG-P--HILQKPSEVTEPRC

FYK----PIRK-TS-QC-KAVPSDSEKSVSICDNLSELLMAMQDELDQMSVEHQE---LLKQMKETESYSVC

DDIECELERLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQREDIYPKGSKNIKNS--PR

KCLNETNAFQK-NNNFHPIR-VHNLQVKLRRDDIMWEQ

>XP\_045400104.1/1-479 centrosomal protein CEP57L1 isoform X2 [Lemur catta]XP\_045400105.1 centrosomal protein CEP57L1 isoform X2 [Lemur catta]

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-----------------------------------------------MNSELMHSVV----GSYLKPP----

-E-------RM-VVPSFTQNESS------QNHK--PM-----DLEVTSSKVFHSPN-------SQ-------

-------ALILALKTLQEKIYRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKEISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMRLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKYSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGALPFVSE-------K------SSSAS-CSVNASV-QNLLQMMQHCG-P--HILQKPSEVTEPRC

LYK----PIRK-TS-LC-KAVPSDSEKSVSICDNLSELLMAMQDELDQMSVEHQE---LLKQMKETESYSVC

DDIECELERLVKKMEIKGEQISKLKKHQASVR--KLQQKVQNSKM-SEASGIQREDIYPKGSKNIKNS--PR

KCLSETNPFQK-NNNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_045400103.1/1-488 centrosomal protein CEP57L1 isoform X1 [Lemur catta]

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---------------------------------------------------MQGM-----------------

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-------A-ESV----------------------------------------------------GLI-----

-----------------------------------------------MNSELMHSVV----GSYLKPP----

-E-------RM-VVPSFTQNESS------QNHK--PM-----DLEVTSSKVFHSPN-------SQ-------

-------ALILALKTLQEKIYRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKEISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMRLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKYSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGALPFVSE-------K------SSSAS-CSVNASV-QNLLQMMQHCG-P--HILQKPSEVTEPRC

LYK----PIRK-TS-LC-KAVPSDSEKSVSICDNLSELLMAMQDELDQMSVEHQE---LLKQMKETESYSVC

DDIECELERLVKKMEIKGEQISKLKKHQASVR--KLQQKVQNSKM-SEASGIQREDIYPKGSKNIKNS--PR

KCLSETNPFQK-NNNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_012608546.1/1-488 centrosomal protein CEP57L1 isoform X2 [Microcebus murinus]

------------------------------------------------------------MR----------

-----------------------------------------------GLTVSVGL-----------------

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-----------------------------------------------MNSDLVHSVV----GSYLKPP----

-E-------RM-FVSSFTQNESS------QNRQ--PM-----NLEVTPSKVFHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNLLSREAAQYKKALENETNERNLAHQELIKQKKEISVQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMRLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLTEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSSK--------------------------KMKCLKRGAP

QQIYSNFGALPFVSE-------K------SSSAS-CSVNASV-QNLLQMMQRCG-P--HILQKPSEVTEPRC

LYK----PIRK-TS-QC-KAIPSDSEKSVSICDNLSELLMALQDELDQMSVEHQE---LLKQMKETESYSVC

DDIECELEHLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQREDICPKGSKNIKNS--PR

KCLNETNPFQK-NNNFHPIR-VHNLQVKLRRDDIMWEQ

>XP\_012608545.1/1-508 centrosomal protein CEP57L1 isoform X1 [Microcebus murinus]

---------------------------------------------------------MRLQR----------

-----------------------------------------------HETCAEGRFPF--------------

--------------------------------------------------PGVWSLWP--------------

-------G-ERE----------------------------------------------------GKI-----

-----------------------------------------------MNSDLVHSVV----GSYLKPP----

-E-------RM-FVSSFTQNESS------QNRQ--PM-----NLEVTPSKVFHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNLLSREAAQYKKALENETNERNLAHQELIKQKKEISVQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMRLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLTEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSSK--------------------------KMKCLKRGAP

QQIYSNFGALPFVSE-------K------SSSAS-CSVNASV-QNLLQMMQRCG-P--HILQKPSEVTEPRC

LYK----PIRK-TS-QC-KAIPSDSEKSVSICDNLSELLMALQDELDQMSVEHQE---LLKQMKETESYSVC

DDIECELEHLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQREDICPKGSKNIKNS--PR

KCLNETNPFQK-NNNFHPIR-VHNLQVKLRRDDIMWEQ

>XP\_053447335.1/1-474 centrosomal protein CEP57L1 isoform X1 [Nycticebus coucang]XP\_053447336.1 centrosomal protein CEP57L1 isoform X1 [Nycticebus coucang]XP\_053447338.1 centrosomal protein CEP57L1 isoform X1 [Nycticebus coucang]XP\_053447339.1 centrosomal protein CEP57L1 isoform X1 [Nycticebus coucang]XP\_053447340.1 centrosomal protein CEP57L1 isoform X1 [Nycticebus coucang]XP\_053447341.1 centrosomal protein CEP57L1 isoform X1 [Nycticebus coucang]

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-----------------------------------------------MNSELVHSVV----GSYLKPP----

-E-------RV-FVPSFTQNESS------QTCQ--PK-----NLEVTSAKVFHSPN-------SQ-------

-------ALILALRTLQEKIHRLELERTQAEDNLNTLSKEAAQYKKALENETNERNLAHEELIKQKKDISIQ

LCSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLREEEHQRKLFQD

KASELQTGLEISRILMSSVSNPKHSRE---KKTSSK--------------------------KTKYLKTKPP

WHIHSKLGTLPLVTE-------K------SSSAS-CSVNAGV-QNLMQMMQHCD-L--HSLQKP---SEPSC

LYK----PIRK-TC-QF-KGVPSGSEKSISICDNVSELLMAMQDELDQMTMEHEE---LLKQMKETESYSVC

DDIECELERLVKKMEMKEEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGIQREDINPKGSKNIKNS--PR

KCFNETNPFLK-NDNFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_021565199.1/1-482 centrosomal protein CEP57L1 [Carlito syrichta]

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--------------------MKN---------------------------------------KLYSV-----

-----------------------------------------------MDSELMHSVV----GSYLKPP----

-E-------RV-FVPSVTQNETS------QSHH--PV-----NLEVTAPKMIHSPN-------NH-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNLKNSKE---KKKSSK--------------------------KTKCLKRGPP

QQNYSKWDALPFVAE-------K------SASAS-CSVNASI-HSLLQMLQHSG-P--HALQKSSRVAKPRC

RYR----PPST-AS-WR-G--PPDTRKPISICDNLSELLIAMQDELDQMHMEYQE---LLEQMKGTESHSVC

DDIECELEHLVKKMEIKGEQISKLKKHQDSVC--KLQQKVQNFEL-SEASGIQREDSNPKGSKNIKNS--PR

KCLTETNPFQK-NRNFHP-R-VHNLQVKLRRDDILWEQ

>XP\_036104663.1/1-476 centrosomal protein CEP57L1 isoform X1 [Molossus molossus]XP\_036104664.1 centrosomal protein CEP57L1 isoform X1 [Molossus molossus]XP\_036104665.1 centrosomal protein CEP57L1 isoform X1 [Molossus molossus]XP\_036104666.1 centrosomal protein CEP57L1 isoform X1 [Molossus molossus]KAF6461602.1 centrosomal protein 57 like 1 [Molossus molossus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFTQNDEL-----SQNHH--SV-----NFEVTSPKMLHSPN-------SQ-------

-------ALTLALKTLQEKIHRLEVERTQAEDNLNILSIEAAQYKKALEDETNERNLVHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDILEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNLKQCKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPVVAE-------K------SSSAR-HSVNASI-QNLLQMMQHCG-P--HIIQKPAEVPEPRC

LYK----PIRT-TS-QC-KALSPDSEKSISICDNLSELLMAMQDELDQMSIEHQE---LLNQMKETESHSVC

ENIEYELEHLVKKMKIKGEQISKLIKHQDSVR--KLQQKVQNSKM-SGASGV-REDSSPTGTKNVKDS--PR

KCWLKSS-LQK-NGNSHPAQ-VHNLQMKLRRDDIMWEQ

>XP\_036269216.1/1-477 centrosomal protein CEP57L1 isoform X1 [Pipistrellus kuhlii]KAF6362664.1 centrosomal protein 57 like 1 [Pipistrellus kuhlii]

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-----------------------------------------------MDSELMHSIV----GSYRKPP----

-E-------RM-FAPSFTQNDEL-----SRNHL--SV-----NFEVTSPKKLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETNERNLVHQELIKQKKDISIQ

LSSAQARCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------TQLQREKEQDQMKLQAKLEKLDLLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEINRILMSSVSNPNLSKE---KKKSSK--------------------------KTKSLRRGPP

QQMYSKFGSVPMVAE-------K------PARAC-HSVNASV-QNLLQMVQHYG-P--QILQKPAEAAEPRC

LYK----PART-AS-QC-KAVPPDSRTSVSICDNLSELLMEMQEELDQMGVEHQE---LLNQMKETESHTVC

EDIECELEHLVKKMEIKREQISKLMKHQDSVR--KLQQKVQNSKM-REASYIQREDSNPKGLKNIKYS--PR

KCLVNHS-LQK-NSNFHPTQ-VHNLQMKLRRDDIMWEQ

>XP\_054578609.1/1-476 centrosomal protein CEP57L1 isoform X1 [Eptesicus fuscus]

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-----------------------------------------------MDSELMHSIV----GSYIKPP----

-E-------RM-FAPSFTQNDEL-----SRNHR--SV-----NFEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETNERNLVHQELIKQKKDISIQ

LSSAQARCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------TQLQREKEQDQMKLQAKLDKLDLLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKLSKE---KKKSSK--------------------------KTKCLKRGPP

QQMYSKFGSMPMVAE-------K------PARSC-HSVNASV-QNLLQMVQHYG-P--QILQKP-EVAEPRC

LYK----PTRT-AS-QC-KVVPPDSEKSVSICDNLSELLMAMQEELDQMGVEHQE---LLNQMKETESHAVC

EDIECELEHLVKKMEIKREQISKLMKHQDSVR--KLQQKVQNSKM-SEASCIQREDSNPKGLKNIKYS--PR

KCLLNHS-LQK-NSNFHPTQ-VHNLQMKLRRDDIMWEQ

>XP\_005883839.1/1-477 PREDICTED: centrosomal protein CEP57L1 [Myotis brandtii]XP\_014386864.1 PREDICTED: centrosomal protein CEP57L1 [Myotis brandtii]XP\_014386865.1 PREDICTED: centrosomal protein CEP57L1 [Myotis brandtii]

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-----------------------------------------------MDSELMHSIV----GSYIKPP----

-E-------RI-FAPSFTQNDEL-----PRNHH--SV-----NFEVTSPKMLQSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNTLSREAAQYKKALEDETNERNLVHQELIKQKKDISIQ

LSSAQTRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------TQLQREKEQDQMKLQAKLEKLDLLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKQSKE---KKKSSK--------------------------KTKCLKRGPP

QQMYSKFGSMPMVSE-------K------PARAC-HSVNASV-QNLLQMVQHYG-P--QILQKPAEVAEPRC

LYK----PTRT-TS-QC-KVVPPHSKKSVSICDNLSELLIAMQEELDQMSVEHQE---LLNQMKETESHAVC

EDIECELEHLVKKMEIKREQISKLMKHQDSVR--KLQQKVQNSKM-SEASCIQREDSNPKGLKNIKYS--PR

KCLLNHS-LQK-NSNFHPTP-VHNLQMKLRRDDIMWEQ

>XP\_006777265.1/1-477 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Myotis davidii]

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-----------------------------------------------MDSELMHSIV----GSYIKPP----

-E-------RI-FAPSFTQNDEL-----PRNHH--SV-----NFKVTSPKMLQSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNTLSREAAQYKKALEDETNERNLVHQELIKQKKDISIQ

LSSAQNRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------TQLQREKEQDQMKLQAKLEKLDLLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKQPKE---KKKSSK--------------------------KTKCLKRGPP

QQMYSKFGSMPMVSE-------K------PARAC-HSVNASV-QNLLQMVQHYG-P--QILQKPAEVAEPRC

IYK----PTRT-TS-QC-KVVPPHSKKSVSICDNLSELLIAMQEELDQMSVEHQE---LLNQMKETESHAVF

EDIECELEHLVKKMEIKREQISKLMKHQDSVR--KLQQKVQNSKM-SEASRIQREDSNPKGLKNIKYS--PR

KCLLNHS-LQK-NSNFHPTP-VHNLQMKLRRDDIMWEQ

>XP\_059556759.1/1-477 centrosomal protein CEP57L1 isoform X2 [Myotis daubentonii]

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-----------------------------------------------MDSELMHSIV----GSYIKPP----

-E-------RI-FAPSFTQNDEL-----PRNHH--SV-----NFKVTSPKMLQSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNTLSREAAQYKKALEDETNERNLVHQELIKQKKDISIQ

LSSAQNRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------TQLQREKEQDQMKLQAKLEKLDLLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKQPKE---KKKSSK--------------------------KTKCLKRGPP

QQMYSKFGSMPMVSE-------K------PARAC-HSVNASV-QNLLQMVQHYG-P--QILQKPAEVAEPRC

LYK----PTRT-TS-QC-KVVPPHSKKSVSICDNLSELLIAMQEELDQMSVEHQE---LLNQMKETESHAVF

EDIECELEHLVKKMEIKREQISKLMKHQDSVR--KLQQKVQNSKM-SEASCIQREDSNPKGLKNIKYS--PR

KCLLNHC-LQK-NSNFHPTP-VHNLQMKLRRDDIMWEQ

>XP\_036174365.1/1-477 centrosomal protein CEP57L1 isoform X1 [Myotis myotis]XP\_036174366.1 centrosomal protein CEP57L1 isoform X1 [Myotis myotis]KAF6341047.1 centrosomal protein 57 like 1 [Myotis myotis]

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-----------------------------------------------MDSELMHSIV----GSYIKPP----

-E-------RI-FAPSFTQNDEL-----PRNHH--SV-----NFKVTSPKMLQSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNTLSREAAQYKKALEDETNERNLVHQELIKQKKDISIQ

LSSAQNRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------TQLQREKEQDQMKLQAKLEKLDLLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKQPKE---KKKSSK--------------------------KTKCLKRGPP

QQMYSKFGPMPMVSE-------K------PARAC-HSVNASV-QNLLQMVQHYG-P--QILQKPAEVAEPRC

LYK----PTRR-TS-QC-KVVPPHSKKSVSICDNLSELLIAMQEELDQMSVEHQE---LLNQMKETESHAVF

EDIECELEHLVKKMEIKREQISKLMKHQDSVR--KLQQKVQNSKM-SEASCIQREDSNPKGLKNIKYS--PR

KCLLNHS-LQK-NSNFHPTP-VHNLQMKLRRDDIMWEQ

>XP\_023620903.1/1-499 centrosomal protein CEP57L1 isoform X2 [Myotis lucifugus]

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------LT-PGPDAHCK---SGRIVHT----------DYT--------------------------I-----

-----------------------------------------------MDSELMHSIV----GSYIKPP----

-E-------RI-FAPSFTQNDEL-----PRNHH--SV-----NFEVTSPKMLQSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNTLSREAAQYKKALEDETNERNLVHQELIKQKKDISIQ

LSSAQTRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------TQLQREKEQDQMKLQAKLEKLDLLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKQPKE---KKKSSK--------------------------KTKCLKRGPP

QQMYSKFGSMPMLSE-------K------PARAC-HSVNASV-QNLLQMVQHYG-P--QILQKPAEVAEPRC

LYK----PTRT-TS-QC-KVVPPHSKKSVSICDNLSELLIAMQEELDQMSVEHQE---LLNQMKETESHAVC

EDIECELEHLVKKMEIKREQISKLMKHQDSVR--KLQQKVQNSKM-SEASCIQREDSNPKGLKNIKYS--PR

KCLLNHS-LQK-NSNFHPTP-VHNLQMKLRRDDIMWEQ

>XP\_054425783.1/1-476 centrosomal protein CEP57L1 [Pteronotus parnellii mesoamericanus]

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-----------------------------------------------MDSELMHSIV----GSYLTPP----

-E-------RV-FVPPFTQNDEL-----SQNHH--SG-----NFEATSSKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSKEAAQYKKSLENETNERNLVHEELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKQSKE---KKKSSK--------------------------KTKCLKRRPP

QQTYSKFGSLPIVAE--------------SAGAR-HSVNTSM-QNVLQMMQHYG-S--HILQKPAEVTEPRC

LYK----PTKT-AL-QR-KAIAPDSEKSVSICDNLSELLMAMQDELDQMSIEHQE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDSVR--KLQQKVQNSKM-SEASSFQQEDSNPKGSKNIKNS--PR

KCLLNNS-LQK-NSNFHPIQ-VHNLQMKLRRDDIMWEQ

>XP\_016073035.1/1-477 PREDICTED: centrosomal protein CEP57L1 [Miniopterus natalensis]XP\_016073036.1 PREDICTED: centrosomal protein CEP57L1 [Miniopterus natalensis]XP\_016073037.1 PREDICTED: centrosomal protein CEP57L1 [Miniopterus natalensis]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFTQNDEL-----SQNHH--SV-----NFEVTSPKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETNERNLVHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDTLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKRSKE---RKKSSK--------------------------KTKCLKRGPP

QQLYSKSGSLPIVAE-------K------SASAH-HSANTSM-QNLLQMMQHYG-S--HILQKPTEVTEPRC

LYK----PTRT-TS-QC-KVVPPNSEKSVSICDNLSELLMAMQDELDQMSIEHQE---LLNQMKETESHAVS

EDIECELEHLVKKMEIKGEQISKLIKHQDSVR--KLQQKVQNSKM-REASGIQREDSNPKGSQNIKNR--PR

KCLLNNS-LQK-NSNFHPTQ-VHNLQMKLRRDDIMWEQ

>XP\_037014924.2/1-476 centrosomal protein CEP57L1 isoform X1 [Artibeus jamaicensis]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RT-FVPPFTQNDEL-----SQNHH--SG-----NFEATSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIRRLELERTQAEDNLNILSREAAEYKKALENETNERNLVHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEVNRILMSSVSNSKRSKE----KKSSK--------------------------KTKCLKREPP

QQIYSKFGSLPIVAE-------K------SATAR-HSVNASM-QNLLHMMQHYG-P--HSLQKPAEVSEPRC

RYK----PTKT-AS-QC-KVVPLDSEKPASICDNLSELLMAMQDELDQMSIEHQE---LLSQMKDTESHSVC

EDIECELEHLIKKMEIKGEQISKLMKHQDNVR--KLQQKFQNSKM-NESSGIQREDRNPKGSKNIKNS--PR

KCLLNNS-LQK-NSNFHPIQ-VHNLQTKLRRDDIMWEQ

>XP\_036920904.1/1-477 centrosomal protein CEP57L1 [Sturnira hondurensis]XP\_036920905.1 centrosomal protein CEP57L1 [Sturnira hondurensis]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RT-FVPPFTQNDEL-----SQNHH--SG-----NFEATSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIRRLELERTQAEDNLNILSKEAAEYKKALENETSERNLVHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEVNRILMSSVSNSKRSKE---KKKSSK--------------------------KTKCLKREPP

QQIYSKFGSLPIVAE-------K------PASAR-HPVNASV-QNLLHMMQHHG-P--PVLQKPADVSEPRC

RYK----PTKT-TS-QC-KVVPLDSEKSVSICDNLSELLVAMQDELDQMSIEHQE---LLSQMKETESHSVC

EDIECELEHLIKKMEIKGEQISKLMKHQDSVR--KLQQKVQNSKV-NESSSIQREDRNPKGSKNIKNS--PR

KCLLNNS-LQK-NSNFHPIQ-VHNLQTKLRRDDIMWEQ

>XP\_045698744.1/1-477 centrosomal protein CEP57L1 [Phyllostomus hastatus]XP\_045698745.1 centrosomal protein CEP57L1 [Phyllostomus hastatus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RA-FVPPFTQNDEL-----SQNHH--SG-----NFEAASSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAEYKKALENETNERNLVHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEVNRILMSSVSNPKQSKE---KKKSSK--------------------------KTKCLKREPP

QQIYSKFGSLPIVAE-------K------SAGAR-HSVNASM-QNLLRMMQHYA-P--RILQKPAEATEPRC

LYR----PTRT-TS-QC-KAVPLDSEKSVSICDNLSELLMAMQDELDQMSIEHQE---LLNQMKETESQSVC

EDIECELEHLIKKMEIKGEQISKLMKHQDNVC--KLQQKVQNSKM-NESSSIQREDRNPKGSKNIKNS--PR

KCLLNNS-LQK-NSSFHPIQ-VHNLQMKLRRDDIMWEQ

>KAF6113142.1/1-484 centrosomal protein 57 like 1 [Phyllostomus discolor]

-------------------------------------------------------------------MSPQL

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-------R----------------------------------------------------------I-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RA-FVPPFTQNDEL-----SQNYH--SG-----NFEAASSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAEYKKALENETNERNLVHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEVNRILMSSVSNPKQSKE---KKKSSK--------------------------KTKCLKREPP

QQIYSKFGSLPIVAE-------K------SAGAR-HSVNASM-QNLLRMMQHYA-P--RILQKPAEVTEPSC

LCR----PTRT-TS-QC-KAVPLDSEKSVSICDNLSELLMAMQDELDQMSIEHQE---LLNQMKETESQSVC

EDIECELEHLIKKMEIKGEQISKLMKHQDSVC--KLQQKIQNSKM-NESSSIQREDRNPKGSKNIKNS--PR

KCLLNNS-LQK-NSSFHPIQ-VHNLQMKLRRDDIMWEQ

>XP\_045044597.2/1-506 centrosomal protein CEP57L1 [Desmodus rotundus]

-------------------------------------------------------------------MSRQR

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-------R-ATSGPPVRA-QPPTVA-----------------G-----------------CYACVMI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPPFTQNCEL-----SQNHH--SG-----NFEATSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSKEAAEYKKALENETNERNLVHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLQAKLEKLDVLEKECFKLTATQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKQSKE---KKKSSK--------------------------KTKCLKKGPP

QQIYSNFGSLPIVAE-------K------SASAS-HSVHASM-QNLLKMMQHYG-P--HILQKPAEVTEPRC

VYK----PTKT-TS-QC-KAVPPDSEKSVSICDNLSELLMAMQDELDQMSIEHQE---LLNQMKETESHSVC

EDIECELEHLIKKMEIKGEQISKLMKHQDSVR--KLEQKVQNSKM-SEASSMQREDRNPKGSKNIKNS--PR

KCLLNNS-PQK-NSNFHPIQ-VHNLQLKLRRDDIMWEQ

>XP\_025300257.1/1-474 centrosomal protein CEP57L1 [Canis lupus dingo]XP\_025300258.1 centrosomal protein CEP57L1 [Canis lupus dingo]XP\_025300259.1 centrosomal protein CEP57L1 [Canis lupus dingo]XP\_025300260.1 centrosomal protein CEP57L1 [Canis lupus dingo]XP\_035553454.1 centrosomal protein CEP57L1 [Canis lupus dingo]XP\_038410815.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_038410816.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_038410817.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_038410818.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_038410819.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_038410820.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_038540252.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_038540253.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_038540254.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_038540255.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_038540256.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_038540257.1 centrosomal protein CEP57L1 [Canis lupus familiaris]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FFPSFTQNNES-----SQTPH--YA-----NFEGTSPKMLHSPN-------SQ-------

-------ALMLALKTLQEKIHRLELERTQAEDNLNILSREAAEYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVANPKSSKE---KKKSLK--------------------------KTRCLKERLP

QQIYSKSGSLPIVAK-------K------SSSAS-HSVNTSV-QSLLQVTQHYG-P--HTHQKL---TEPRC

LYK----PTRT-TS-QG-KAEPSDSKHSISIGDNLSELLMAMQDELDQMNMKHEE---LLNQMKETESRSVC

EDLECELEHLVKKMEIKGEQISKLIKHQENVR--KLQQKVQQSKM-SEASGIQREDNNLKGSKNIKNS--SR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_005627744.1/1-474 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_005627745.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_005627747.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_005627748.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_038532483.1 centrosomal protein CEP57L1 [Canis lupus familiaris]XP\_038532486.1 centrosomal protein CEP57L1 [Canis lupus familiaris]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FFPSFTQNNES-----SQTPH--YA-----NFEGTSPKMLHSPN-------SQ-------

-------ALMLALKTLQEKIHRLELERTQAEDNLNILSREAAEYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVANPKSSKE---KKKSLK--------------------------KTRCLKERLP

QQIYSKSGSLPIVAK-------K------SSSAS-HSVNTSV-QSLLQVTQHYG-P--HTHQKL---TESRC

LYK----PTRT-TS-QG-KAEPSDSKHSISIGDNLSELLMAMQDELDQMNMKHEE---LLNQMKETESRSVC

EDLECELEHLVKKMEIKGEQISKLIKHQENVR--KLQQKVQQSKM-SEASGIQREDNNLKGSKNIKNS--SR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_025861568.1/1-477 centrosomal protein CEP57L1 isoform X1 [Vulpes vulpes]XP\_025861569.1 centrosomal protein CEP57L1 isoform X1 [Vulpes vulpes]XP\_025861570.1 centrosomal protein CEP57L1 isoform X1 [Vulpes vulpes]XP\_025861571.1 centrosomal protein CEP57L1 isoform X1 [Vulpes vulpes]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-IFPSFTQNNES-----SQTPH--YA-----NFEGTSPKMLHSPN-------SQ-------

-------ALMLALKTLQEKIHRLELERTQAEDNLNILSREAAEYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVANPKSSRE---KKKSLK--------------------------KTRCLKEGPP

QQIYSKSGSLPIVAK-------K------SSSAS-HSVNTSM-QSLLQVTHHYG-P--HTHQKL---TEPRC

LYK----PTRT-TS-QA-KAEPSDSKHSISIGDNLSELLMAMQDELDQMNMKHEELLNLLNQMKETESHSVC

EDLECELEHLVKKMEVKGEQISKLIKHQENVR--KLQQKVQQSKM-SEASGIQREDNNLKGSKNIKNS--SR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_041609770.1/1-477 centrosomal protein CEP57L1 [Vulpes lagopus]XP\_041609772.1 centrosomal protein CEP57L1 [Vulpes lagopus]XP\_041609781.1 centrosomal protein CEP57L1 [Vulpes lagopus]XP\_041609788.1 centrosomal protein CEP57L1 [Vulpes lagopus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FFPSFTQNNES-----SQTPH--YA-----NFEGTSPKMLHSPN-------SQ-------

-------ALMLALKTLQEKIHRLELERTQAEDNLNILSREAAEYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVANPKSSRE---KKKSLK--------------------------KTRCLKEGPP

QQIYSKSGSLPIVAK-------K------YSSAS-HSVNTSM-QNLLQVTQHYG-P--HTHQKL---TEPRC

LYK----PTRT-TS-QA-KAEPSDSKHSISIGDNLSELLMAMQDELDQMNMKHEELLNLLNQMKETESHSVC

EDLECELEHLVKKMEVKGEQISKLIKHQENVR--KLQQKVQQSKM-SEASGIQREDNNLKGSKNIKNS--SR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>CAD7678214.1/1-476 unnamed protein product [Nyctereutes procyonoides]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FFPSFTQNNES-----SQTPH--YA-----NIEGTSPKMLHSPN-------SQ-------

-------ALMLALKTLQEKIHRLELERTQAEDNLNILSREAAEYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKSSKE---KKKSLK--------------------------KTRCLKERPP

QQIYSKSGSLPIVAK-------K------SSSAS-HSVNTSM-QSLLQVAQHYG-P--HTHQKL---TEPRC

LYK----PIRT-TS-QG-KAEPSDSKHSISIGDNLSELLMAMQDELDQMNMKHEE---LLNQMKETESHSVR

EDLECELEHLVKKMEIKGEQISKLIKHQENVR--KLQQKVQQSKM-SEASGIQREDNNLKGSKNIKNS--SR

KCLLTNS-LQK-NSSFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_032712828.1/1-475 LOW QUALITY PROTEIN: centrosomal protein CEP57L1-like [Lontra canadensis]

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-----------------------------------------------MDSELMHSIV----GSYHKP-----

---------XV-FIPSFTQNDAA-----SQTHH--ST-----NIEATFPKMLHSPK-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITLQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKQQAKLEKLDVLEKECFKFTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSTPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------E------SASAS-CFVNSSM-QSILQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKITISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDTECELEHLAKKMEIKEEQISKLLKHQDNVR--KLQQKFQNSKT-SEASKIQREENNLKGSKTIKNS--PR

RCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_059032896.1/1-479 centrosomal protein CEP57L1 isoform X3 [Mustela lutreola]XP\_059032897.1 centrosomal protein CEP57L1 isoform X3 [Mustela lutreola]XP\_059032898.1 centrosomal protein CEP57L1 isoform X3 [Mustela lutreola]XP\_059032899.1 centrosomal protein CEP57L1 isoform X3 [Mustela lutreola]XP\_059032900.1 centrosomal protein CEP57L1 isoform X3 [Mustela lutreola]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FIPSFTQNDAT-----SQTHH--ST-----NLEATTPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LNSAQSRCTVLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQANVR--KLQQKVQNSKM-SEASGIQREENNLKGSKPIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_004753531.1/1-479 centrosomal protein CEP57L1 isoform X3 [Mustela putorius furo]XP\_004753532.1 centrosomal protein CEP57L1 isoform X3 [Mustela putorius furo]XP\_004753533.1 centrosomal protein CEP57L1 isoform X3 [Mustela putorius furo]XP\_004753534.1 centrosomal protein CEP57L1 isoform X3 [Mustela putorius furo]XP\_004753535.1 centrosomal protein CEP57L1 isoform X3 [Mustela putorius furo]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FIPSFTQNDAT-----SQTHH--ST-----NLEATTPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQANVR--KLQQKVQNSKM-SEASGIQREENNLKGSKPIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_032194755.1/1-479 centrosomal protein CEP57L1 isoform X3 [Mustela erminea]XP\_032194756.1 centrosomal protein CEP57L1 isoform X3 [Mustela erminea]XP\_032194757.1 centrosomal protein CEP57L1 isoform X3 [Mustela erminea]XP\_032194759.1 centrosomal protein CEP57L1 isoform X3 [Mustela erminea]XP\_032194760.1 centrosomal protein CEP57L1 isoform X3 [Mustela erminea]

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-------------------------M----------------------------------------I-----

-----------------------------------------------MDSELMHSMV----GSYHKPP----

-E-------RV-FIPSFTQNDAA-----SQTHH--ST-----NLEATTPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVTE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HICQKLPEVTEPPC

FYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQREENNLKGSKPIKNS--PR

KCLLTNS-LQK-NNNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_022375893.1/1-479 centrosomal protein CEP57L1 isoform X1 [Enhydra lutris kenyoni]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FIPSFTQNDAA-----SQTHH--ST-----NLEATSPQMLHSPN-------SQ-------

-------ALLLALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISVGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQRDENNLKGSKTIKNS--PR

RCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_047589454.1/1-479 centrosomal protein CEP57L1 isoform X3 [Lutra lutra]XP\_047589455.1 centrosomal protein CEP57L1 isoform X3 [Lutra lutra]XP\_047589456.1 centrosomal protein CEP57L1 isoform X3 [Lutra lutra]XP\_047589457.1 centrosomal protein CEP57L1 isoform X3 [Lutra lutra]XP\_047589458.1 centrosomal protein CEP57L1 isoform X3 [Lutra lutra]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FIPSFTQNDAA-----SQTHH--ST-----NLEATSPKMLHSPN-------SQ-------

-------ALLLALKTLQEKIHRLELERTRAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHED---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQREENNLKGSKTIKNS--PR

RCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_045861838.1/1-479 centrosomal protein CEP57L1 isoform X3 [Meles meles]XP\_045861839.1 centrosomal protein CEP57L1 isoform X3 [Meles meles]XP\_045861840.1 centrosomal protein CEP57L1 isoform X3 [Meles meles]XP\_045861841.1 centrosomal protein CEP57L1 isoform X3 [Meles meles]XP\_045861842.1 centrosomal protein CEP57L1 isoform X3 [Meles meles]XP\_045861843.1 centrosomal protein CEP57L1 isoform X3 [Meles meles]XP\_045861844.1 centrosomal protein CEP57L1 isoform X3 [Meles meles]XP\_045861845.1 centrosomal protein CEP57L1 isoform X3 [Meles meles]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FIPSFTQNDAA-----SQTHH--ST-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIRREENNLKGSKTIKNS--PR

KCLLTSS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_032714164.1/1-479 centrosomal protein CEP57L1 isoform X3 [Lontra canadensis]XP\_032714165.1 centrosomal protein CEP57L1 isoform X3 [Lontra canadensis]

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-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FIPSFTQNDAA-----SQTHH--ST-----NVEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSIEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQDNVR--KLQQKVQNSKM-SEASKIQREENNLKGSKTIKNS--PR

RCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_044100402.1/1-479 centrosomal protein CEP57L1 isoform X3 [Neogale vison]XP\_044100409.1 centrosomal protein CEP57L1 isoform X3 [Neogale vison]XP\_044100414.1 centrosomal protein CEP57L1 isoform X3 [Neogale vison]XP\_044100419.1 centrosomal protein CEP57L1 isoform X3 [Neogale vison]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSVV----GSYHKPP----

-E-------RV-FIPSFTQNDAA-----SRTHH--ST-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNIPSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQDNVR--KLQQKVQNSKM-SEATGIQREENNLKGSKPIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>VCW48838.1/1-479 unnamed protein product [Gulo gulo]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELIHSIV----GSYHKPP----

-E-------RV-FIPSFTQNDAA-----SQTHH--ST-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKYSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKRPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLSQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQREENNLKGSKTIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_059257149.1/1-488 centrosomal protein CEP57L1 isoform X1 [Mustela nigripes]

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-------------------EVERVDL-------------------------------------VSTI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FIPSFTQNDAT-----SQTHH--ST-----NLEATTPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE----KKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQANVR--KLQQKVQNSKM-SEASGIQREENNLKGSKPIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_059032894.1/1-489 centrosomal protein CEP57L1 isoform X1 [Mustela lutreola]

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-------------------EVESVDL-------------------------------------VSTI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FIPSFTQNDAT-----SQTHH--ST-----NLEATTPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LNSAQSRCTVLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQANVR--KLQQKVQNSKM-SEASGIQREENNLKGSKPIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_004753528.1/1-489 centrosomal protein CEP57L1 isoform X1 [Mustela putorius furo]

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-------------------EVESVDL-------------------------------------VSTI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FIPSFTQNDAT-----SQTHH--ST-----NLEATTPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQANVR--KLQQKVQNSKM-SEASGIQREENNLKGSKPIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_032194753.1/1-489 centrosomal protein CEP57L1 isoform X1 [Mustela erminea]

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-------------------EVESVDL-------------------------------------VSTI-----

-----------------------------------------------MDSELMHSMV----GSYHKPP----

-E-------RV-FIPSFTQNDAA-----SQTHH--ST-----NLEATTPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVTE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HICQKLPEVTEPPC

FYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQREENNLKGSKPIKNS--PR

KCLLTNS-LQK-NNNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_045861836.1/1-489 centrosomal protein CEP57L1 isoform X1 [Meles meles]

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-------------------EVGSVDL-------------------------------------VSTI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FIPSFTQNDAA-----SQTHH--ST-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIRREENNLKGSKTIKNS--PR

KCLLTSS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_032714162.1/1-489 centrosomal protein CEP57L1 isoform X1 [Lontra canadensis]

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-------------------EVESVDL-------------------------------------VSTI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FIPSFTQNDAA-----SQTHH--ST-----NVEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSIEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQDNVR--KLQQKVQNSKM-SEASKIQREENNLKGSKTIKNS--PR

RCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_047589452.1/1-489 centrosomal protein CEP57L1 isoform X1 [Lutra lutra]

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-------------------EVESVDL-------------------------------------VSTI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FIPSFTQNDAA-----SQTHH--ST-----NLEATSPKMLHSPN-------SQ-------

-------ALLLALKTLQEKIHRLELERTRAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHED---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQREENNLKGSKTIKNS--PR

RCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_044100395.1/1-486 centrosomal protein CEP57L1 isoform X2 [Neogale vison]

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-------------------EVESVD----------------------------------------SI-----

-----------------------------------------------MDSELMHSVV----GSYHKPP----

-E-------RV-FIPSFTQNDAA-----SRTHH--ST-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNIPSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQDNVR--KLQQKVQNSKM-SEATGIQREENNLKGSKPIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_044100391.1/1-489 centrosomal protein CEP57L1 isoform X1 [Neogale vison]

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-------------------EVESVDS-------------------------------------VSTI-----

-----------------------------------------------MDSELMHSVV----GSYHKPP----

-E-------RV-FIPSFTQNDAA-----SRTHH--ST-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNIPSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE---KKKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQDNVR--KLQQKVQNSKM-SEATGIQREENNLKGSKPIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_004406751.1/1-476 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Odobenus rosmarus divergens]

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-----------------------------------------------MDSELIHGIV----GSYLKPP----

-E-------RV-FIPSFIQNDES-----SQTHH--CA-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKEANERNLAQQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDILEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNPKHCKE----KKSLK--------------------------KTRCLKGGPP

QQIHSKFGSLPVVAE-------K------SASAN-YSVNASM-QSLLQLMKHYG-P--HNCQKLTEVTEPRC

LYK----PTRT-TS-HS-KAEPSDSKNSVSIGDNLSELLMAMQDELDQMSMEHEE---LLSQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQREESNLKGSKNIKNS--PR

KCLLTNS-LQK-NSKFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_021548772.1/1-479 centrosomal protein CEP57L1 isoform X1 [Neomonachus schauinslandi]XP\_021548773.1 centrosomal protein CEP57L1 isoform X1 [Neomonachus schauinslandi]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FIPSFTQNDES-----SQTHH--SA-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHCKE---KKKSLK--------------------------KTRCLKGGPP

QQIHSEFGSLPVVAE-------K------SASAN-YPVNASM-QSLLQLMQRYG-P--HNCQKLTEVTEPRC

LYK----PTRT-TS-QG-KAEPSDSKNSISIGDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHLVC

EDIECELEHLVKKMEIKGEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQREESNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_034847655.1/1-480 centrosomal protein CEP57L1 [Mirounga leonina]XP\_034847656.1 centrosomal protein CEP57L1 [Mirounga leonina]XP\_034847657.1 centrosomal protein CEP57L1 [Mirounga leonina]XP\_034847658.1 centrosomal protein CEP57L1 [Mirounga leonina]XP\_045721235.1 centrosomal protein CEP57L1 isoform X1 [Mirounga angustirostris]XP\_045721236.1 centrosomal protein CEP57L1 isoform X1 [Mirounga angustirostris]XP\_045721237.1 centrosomal protein CEP57L1 isoform X1 [Mirounga angustirostris]XP\_045721238.1 centrosomal protein CEP57L1 isoform X1 [Mirounga angustirostris]XP\_054361462.1 centrosomal protein CEP57L1 isoform X1 [Mirounga angustirostris]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FIPSFTQNDES-----SQTHH--SA-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHCKEK--KKKSLK--------------------------KTRCLKGGPP

QQIHSEFGSLPVVAE-------K------SASAN-YPVNASM-QSVLQLMQHYG-P--HNCQKLTEVTEPRC

LYK----PTRT-TS-QG-KAEPSDSKNSISIGDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHLVC

EDIECELEHLVKKMEIKGEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQREESNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_035931190.1/1-478 LOW QUALITY PROTEIN: centrosomal protein CEP57L1 [Halichoerus grypus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FIPSFTQNDES-----SQTHH--SA-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNSLSREAAQYXKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHCKEK--KKKSLK--------------------------KTRCLKGGPP

QQIHSKFGSLPVVAE-------K------SASAN-YPVNASM-QSLLQLMQHYG-P--HNCQKLTEVTEPRC

LYK----PTRT-TS-QG-KAEPSDSKNSISIGDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQREDSNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_032263989.1/1-480 centrosomal protein CEP57L1 isoform X1 [Phoca vitulina]XP\_032263991.1 centrosomal protein CEP57L1 isoform X1 [Phoca vitulina]XP\_032263992.1 centrosomal protein CEP57L1 isoform X1 [Phoca vitulina]XP\_032263993.1 centrosomal protein CEP57L1 isoform X1 [Phoca vitulina]XP\_032263994.1 centrosomal protein CEP57L1 isoform X1 [Phoca vitulina]XP\_032263995.1 centrosomal protein CEP57L1 isoform X1 [Phoca vitulina]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FIPSFTQNDES-----SQTHH--SA-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNSLSREAAQYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHCKEK--KKKSLK--------------------------KTRCLKGGPP

QQIHSKFGSLPAVAE-------K------SASAN-YPVDASM-QSLLQLMQHYG-P--HNCQKLTEVTEPRC

LYK----PTRT-TS-QG-KAEPSDSKNSISIGDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQREDSNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_027459005.1/1-477 centrosomal protein CEP57L1 [Zalophus californianus]XP\_027459008.1 centrosomal protein CEP57L1 [Zalophus californianus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FIPSFIQNDES-----SQTHH--CA-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETHERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLENLDILEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNPKHCKE---KKKSLK--------------------------KTRCLKGGPP

QQIHSKFGSLPVVAE-------K------SASAN-YSVNASM-QSLLQLMKHYG-P--HNCQKLTEVTEPRC

LYK----PTRT-TF-QG-KAEPSDSKNSISIGDNLSELVMAMQDELDQMSMEHKE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGVQREESNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_027960087.1/1-477 centrosomal protein CEP57L1 isoform X1 [Eumetopias jubatus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FIPSFIQNDES-----SQTHH--CA-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETHERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLENLDILEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNPKHCKE---KKKSLK--------------------------KTRCLKGGPP

QQIHSKFGSLPVVAE-------K------SASAN-YSVNASM-QSLLQLMKHYG-P--HNCQKLTEVTEPRC

LYK----PTRT-TF-QG-KAEPSDSKNSISIGDNLSELVMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECKLEHLVKKMEIKGEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGVQREESNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_025719481.1/1-479 centrosomal protein CEP57L1 isoform X1 [Callorhinus ursinus]XP\_025719486.1 centrosomal protein CEP57L1 isoform X1 [Callorhinus ursinus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FIPSFIQNDES-----SQTHH--CA-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETHERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLENLDILEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNPKHCKE---KKKSLK--------------------------KTRCLKGGPP

QQIHSKFGSLPVVAE-------K------SASVN-YSVNASM-QSLLQLMKHYG-P--HNCQKLTEVTEPRC

LYK----PTRT-TF-QG-KAEPSDSKNSISIGDNLSELVMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGVQREESNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_002917389.1/1-479 centrosomal protein CEP57L1 isoform X1 [Ailuropoda melanoleuca]XP\_011220816.1 centrosomal protein CEP57L1 isoform X1 [Ailuropoda melanoleuca]XP\_011220817.1 centrosomal protein CEP57L1 isoform X1 [Ailuropoda melanoleuca]XP\_019653200.1 centrosomal protein CEP57L1 isoform X1 [Ailuropoda melanoleuca]XP\_034524848.1 centrosomal protein CEP57L1 isoform X1 [Ailuropoda melanoleuca]

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-----------------------------------------------MDSELMHSMV----GSYLKPP----

-E-------RV-FIPSFSQNYES-----SQTHH--SA-----NLEVTAPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNVLSREAAQYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKRSKE---KKKSLK--------------------------KTKCLKGGPP

QQIYSKLGSPPITAE-------K------SSSAS-YSVNASM-QSLLQLMQHYG-P--HTCQKLTEVTEPRC

LYK----PTRI-TS-QG-KAEPSDSKNSISIGDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEYLVKKMEIKGEQISKLMKHQDNVR--KLQQKVQNSKM-NEASGIQREESNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_008704460.2/1-479 centrosomal protein CEP57L1 isoform X1 [Ursus maritimus]XP\_040483544.1 centrosomal protein CEP57L1 isoform X1 [Ursus maritimus]

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-----------------------------------------------MDSELMHSMV----GSYLKPP----

-E-------RV-FIPSFSQNYES-----SQTHH--SA-----NLEVTAPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNVLSREAAQYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKRSKE---KKKSLK--------------------------KTKCLKGGPP

QQIYSKLGSPPITAE-------K------SSSAS-SSVNASM-QSLLQLMQHYR-P--HTCQKLTEVTEPRC

LYK----PTRT-TS-QG-KAEPSDSKNSISIGDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEYLVKKMEIKGEQISKLMKHQDNVR--KLQQKVQNSKM-NEASGIQREESNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_045654386.1/1-479 centrosomal protein CEP57L1 isoform X1 [Ursus americanus]XP\_045654387.1 centrosomal protein CEP57L1 isoform X1 [Ursus americanus]

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-----------------------------------------------MDSELMHSMV----GSYLKPP----

-E-------RV-FIPSFSQNYES-----SQTHH--SA-----NLEVTAPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNVLSREAAQYKKALEKETNERNLAHQELVKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKRSKE---KKKSLK--------------------------KTKCLKGGPP

QQIYSKLGSPPITAE-------K------SSSAS-SSVNASM-QSLLQLMQHYR-P--HTCQKLTEVTEPRC

LYK----PTRT-TS-QG-KAEPSDSKNSISIGDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEYLVKKMEIKGEQISKLMKHQDNVR--KLQQKVQNSKM-NEASGIQREESNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_044244766.1/1-479 centrosomal protein CEP57L1 isoform X1 [Ursus arctos]XP\_044244767.1 centrosomal protein CEP57L1 isoform X1 [Ursus arctos]XP\_057167195.1 centrosomal protein CEP57L1 isoform X1 [Ursus arctos]XP\_057167196.1 centrosomal protein CEP57L1 isoform X1 [Ursus arctos]

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-----------------------------------------------MDSELMHSMV----GSYLKPP----

-E-------RV-FIPSFSQNYES-----SQTHH--SA-----NLEVTAPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNVLSREAAQYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNPKRSKE---KKKSLK--------------------------KTKCLKGGPP

QQIYSKLGSPPITAE-------K------SSSAS-SSVNASM-QSLLQLMQHYR-P--HTCQKLTEVTEPRC

LYK----PTRT-TS-QG-KAEPSDSKNSISIGDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEYLVKKMEIKGEQISKLMKHQDNVR--KLQQKVQNSKM-NEASGIQREESNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_030171964.1/1-477 centrosomal protein CEP57L1 isoform X1 [Lynx canadensis]XP\_030171965.1 centrosomal protein CEP57L1 isoform X1 [Lynx canadensis]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAQNNES-----SQTYR--SA-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKEALEKETNERNLVHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNKKCSKE---KKKSSK--------------------------KTKCLKRGPR

QQIYSKFESLPIMAE-------K------SASTG-HSVNRSM-QSLLQMMQHYG-P--HILQKPTEVTELRC

LYK----PTRT-ST-QC-RAEPSDSKNSLSICDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKIQNSKM-SEASGIQREDSSPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_046958537.1/1-477 centrosomal protein CEP57L1 [Lynx rufus]XP\_046958538.1 centrosomal protein CEP57L1 [Lynx rufus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAQNNES-----SQTYR--SA-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKEALEKETNERNLVHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKKQDHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNKKCSKE---KKKSSK--------------------------KTKCLKRGPR

QQIYSKFESLPIMAE-------K------SASTG-HSVNRSM-QSLLQMMQHYG-P--HILQKPTEVTELRC

LYK----PTRT-ST-QC-RAEPSDSKNSLSICDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKIQNSKM-SEASGIQREDSSPKGSKNIKNS--PR

KCLLTNY-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_058590893.1/1-477 centrosomal protein CEP57L1 isoform X1 [Neofelis nebulosa]XP\_058590894.1 centrosomal protein CEP57L1 isoform X1 [Neofelis nebulosa]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAQNNES-----SQTYR--SV-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKEALEKETNERNLVHQELKKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNKKCSKE---KKKSSK--------------------------KTKCLKRGPR

QQIYSKFESLPIMAE-------K------SASAG-HSVNRNM-QSLLQMMQHYG-P--HILQKPTEVTELRC

LYK----PTRT-SA-QC-KAEPSDSKNSLSICDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKIQNSKM-SEASGIQREDSSPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_025780923.1/1-477 centrosomal protein CEP57L1 [Puma concolor]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAQNNET-----SQTYR--SA-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKEALEKETNERNLVHQELIKQKKDITIQ

LNSAQVRCTLLEKQLEYTKRMVLNVEREKNMILQQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNKKCSKE---KKKSSK--------------------------KTKCLKRGPR

QQIYSKFESLPIMAE-------K------SASAG-HSVNRRM-QSLLQMMQHYG-P--HILQKPTEVTELRC

LYK----PTRT-SA-QC-KAEPSDSKNSLSICDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKIQKSKM-SEASGIQREDSSPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_045355182.1/1-479 centrosomal protein CEP57L1 isoform X2 [Leopardus geoffroyi]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAQNNES-----SQTYR--SA-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKEALEKETNERNLVHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNKKCSKE---KKKSSK--------------------------KTKCLKRGPR

QQIYSKFESLPIMAE-------K------SASAG-HSVNRSM-QSLLQMMQHYG-P--HILQKPTEVTELRC

LYK----PTRT-SA-QC-KAEPSDSKNSLSICDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKIQNSKM-SEASGIQREDSSPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_047713949.1/1-479 centrosomal protein CEP57L1 isoform X1 [Prionailurus viverrinus]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAQNNES-----SQTYR--SA-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKEALEKETNERNLVHQELIKQKKDITIQ

LNSAQVRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNKKCSKE---KKKSSK--------------------------KTKCLKRGPR

QQIYSKFESLPIMAE-------K------SASAG-HSVNRSM-QSLLQMMQHYE-P--HILQKPTEVTELRC

LYK----PTRT-SA-QC-KAEPSDSKNSLSICDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKIQNSKM-TEASGIQREDSSPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_011280817.2/1-479 centrosomal protein CEP57L1 isoform X1 [Felis catus]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAQNNES-----SQTYR--SA-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQEKIRRLELERTQAEDNLNILSREAAHYKEALEKETNERNLVHQELIKQKKDITIQ

LNSAQVRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNKKCSKE---KKKSSK--------------------------KTKCLKRGPH

QQIYSKFESLPIMAE-------K------SASAG-HSVNRSM-QSLLQMMQHYG-P--HILQKPTEVTELRC

LYK----PTRT-SA-QC-KAEPSDSKNSLSICDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKIQNSKM-SEASGIQREDSSPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_040330267.1/1-479 centrosomal protein CEP57L1 isoform X1 [Puma yagouaroundi]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAQNNET-----SQTYR--SA-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKEALEKETNERNLVHQELIKQKKDITIQ

LNSAQVRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNKKCSKE---KKKSSK--------------------------KTKCLKRGPR

QQIYSKFESLPITAE-------K------SASAG-HSVNRSM-QSLLQMMQHYG-P--HILQKPTEVTELRC

LYK----PTRT-SA-QC-KAEPSDSKNSLSICDNLSELLMAMQDELDQMSMEHKE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKIQKSKM-SEASGIQREDSSPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_053078370.1/1-479 centrosomal protein CEP57L1 isoform X1 [Acinonyx jubatus]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAQNNET-----SQTYC--SA-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKEALEKETNERNLVHQELIKQKKDITVQ

LNSAQVRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHHRKLFQD

KASELQTGLEISRILMSSVSNKKCSKK---KKKSSK--------------------------KTKCLKRGPR

QQIYSKFESLPIMAE-------K------SASAG-HSVNRSM-QSLLQMMQHYG-P--HILQKPTEVTELRC

LYK----PTRT-SA-QC-KAEPSDSKNSLSICDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKIQNSKM-SEASGIQREDSSPKGSKNIKSS--PR

KCLLTNS-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_042842884.1/1-479 centrosomal protein CEP57L1 isoform X1 [Panthera tigris]XP\_042842885.1 centrosomal protein CEP57L1 isoform X1 [Panthera tigris]XP\_042842886.1 centrosomal protein CEP57L1 isoform X1 [Panthera tigris]XP\_042842888.1 centrosomal protein CEP57L1 isoform X1 [Panthera tigris]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAQNNES-----SQTYR--SA-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKEALEKETNERNLVHQELKKQKKDIMIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQEHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNKKCSKE---KKKSSK--------------------------KTKCLKRGPH

QQIYSKFESLPIMAE-------K------SASAG-HSVNRSM-QSLLQMMQHYG-P--HILRKPTEVTELRC

LYK----PTRT-SA-QC-KAEPSDSKNSLSICDNLSELLMAMQGELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEMKGEQISKLMKHQDNVR--KLQQKIQNSKM-SEASGIQREDSSPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_060472328.1/1-479 centrosomal protein CEP57L1 isoform X1 [Panthera onca]XP\_060472329.1 centrosomal protein CEP57L1 isoform X1 [Panthera onca]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAQNNES-----SQTYR--SA-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQAKIHRLELERTQAEDNLNILSREAAQYKEALEKETNERNLVHQELKKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNKKCSKE---KKKSSK--------------------------KTKCLKRGPH

QQIYSKFESLPIMAE-------K------SASAG-HSVNRSM-QSLLQMMQHYG-P--HILRKPTEVTELRC

LYK----PTRT-SA-QC-KAEPFDSKNSLSICDNLSELLMAMQGELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKIQNSKM-SEASGIQREDSSPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_049510075.1/1-479 centrosomal protein CEP57L1 isoform X1 [Panthera uncia]XP\_049510076.1 centrosomal protein CEP57L1 isoform X1 [Panthera uncia]XP\_049510077.1 centrosomal protein CEP57L1 isoform X1 [Panthera uncia]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAQNNES-----SQTYR--SA-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKEALEKETNERNLVHQELKKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMIVEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNKKCSKE---KKKSSK--------------------------KTKCLKRGPH

QQIYSKFESLPIMAE-------K------SASAG-HSVNRSM-QSLLQMMQHYG-P--HILRKPTEVTELRC

LYK----PTRT-SA-QC-KAEPSDSKNSLSICDNLSELLMAMQGELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKIQNSKM-SEASGIQREDSSPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_042795454.1/1-479 centrosomal protein CEP57L1 isoform X1 [Panthera leo]XP\_042795455.1 centrosomal protein CEP57L1 isoform X1 [Panthera leo]XP\_042795456.1 centrosomal protein CEP57L1 isoform X1 [Panthera leo]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAQNNES-----SQTYR--SA-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQAKIHRLELERTQAEDNLNILSREAAQYKEALEKETNERNLVHQELKKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNKKCSKE---KKKSSK--------------------------KTKCLKRGPH

QQIYSKFESLPIMAE-------K------SASAG-HSVNRSM-QSLLQMMQPYG-P--HILRKPTEVTELRC

LYK----PTRT-SA-QC-KAEPSDSKNSLSICDNLSELLMAMQGELDQMSMEHKE---LLNQMKETESHSVC

EDIECELEHLVKKMEMKGEQISKLMKHQDNVR--KLQQKIQNSKM-SEASGIQREDSSPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_019298581.2/1-477 centrosomal protein CEP57L1 isoform X1 [Panthera pardus]XP\_019298582.2 centrosomal protein CEP57L1 isoform X1 [Panthera pardus]XP\_053760568.1 centrosomal protein CEP57L1 isoform X1 [Panthera pardus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFAHNNES-----SQTYR--SA-----NLEVTSPKMLHSPN-------GQ-------

-------ALILALKTLQAKIHRLELERTQAEDNLNILSREAAQYKEALEKETNERNLVHQELKKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNKKCSKE---KKKSSK--------------------------KTKCLKRGPH

QQIYSKFESLPIMAE-------K------SASAG-HSVNRSM-QSLLQMMQPYG-P--HILQKPTEVTELRC

LYK----PTRT-SA-QC-KAEPSDSKNSLSICDNLSELLMAMQGELDQMSMEHKE---LLNQMKETESHSVC

EDIECELEHLVKKMEMKGEQISKLMKHQDNVR--KLQQKIQNSKM-SEASGIQREDSSPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVR-VHNLQMKLRRDDIMWEQ

>KAF0873796.1/1-477 CE57L protein, partial [Crocuta crocuta]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSLTQSDES-----SQTYR--SV-----NLEGTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERNLAHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEMSRILMSSVSNQKRSKE---KKKSSK--------------------------KTKCLKRGSR

QQTYSKFESLPNMAE-------K------SASAG-CSVNRSM-QSLLQMMQRYG-P--HILQKPTEVTEPRC

LYE----PSRT-TA-QC-KAEHSDSKNSLSICDNLSELLMAMQDELGQMSMEHEE---LLNQMKETESPSVC

EDIECELEHLVKKMEIKEEQISKLMKHQDNVR--KLQQKVQNSKI-SEASGIQQEDNNPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_039093337.1/1-483 centrosomal protein CEP57L1 isoform X1 [Hyaena hyaena]

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--------------------------------------------------------------PNSAI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSLTQSDES-----SQTYR--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERNLAHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEMSRILM-SVSNQKRSKE---KKKSSK--------------------------KTKCLKRGSH

QQTYSKFESLPNMAE-------K------SASAG-CSVNRSM-QSLLQMMQRYG-P--HILQKPTEVTEPRC

LYE----PSRT-TA-QC-KAEHSDSKNSLSICDNLSELLMAMQDELGQMSMEHKE---LLNQMKETESPSVC

EDIECELEHLVKKMEIKEEQISKLMKHQDNVR--KLQQKVQNSKI-SEASGIQQEDNNPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_029801124.1/1-477 centrosomal protein CEP57L1 isoform X1 [Suricata suricatta]

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----------------------------------------------------------------MRI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFIQNDES-----SQTHR---------NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAEYKKALEKETNERDLAHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNQKRSKE----KKSSK--------------------------KTKCLKRGPC

QQIYSRFESLPIMAE-------K------SASAG-RSVNRST-QSLLQMQQHYG-P--YILQKPTEVTKPSC

LYK----PSRT-TA-QC-KAEPSDSKYSLSICDNLTELLMTMQDELDQMSVEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDNIR--KLQQKVQNSKM-SEASGIRREDSNLKGSKNIKNS--PR

KCLLTNC-IQK-NNNFHPVE-VHNLQMKLRRDDIMWEQ

>XP\_014636636.1/1-453 PREDICTED: centrosomal protein CEP57L1 isoform X2 [Ceratotherium simum simum]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDPELMHSIV----GSYLKPP----

-E-------RV-FVPSFTQNDES-----TQTHH--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKYLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKCSKE---KKKSS-------------------------------------

----------------------K------SASAS-HSRNASR-QNLLQMMQHYG-P--HVLQKRAEVTEPRC

LYK----PTRT-TS-RC-EAVPPDSGKSVCICDNLSELLMAMQDELDQMSMEHQE---LLNQMKETESHSVF

ENIECELEHLVKKMEIKGEQISKLKKHQDNVH--KLQQKVQNSRT-SEASGIQQEDSNPNRSKNVKNT--PR

KCLPANP-LQK-NSNFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_058422487.1/1-479 centrosomal protein CEP57L1 isoform X2 [Diceros bicornis minor]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDPELMHSIV----GSYLKPP----

-E-------RV-FVPSFTQNDES-----TQTHH--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKYLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKCSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVVE-------K------SASAS-HSRNASR-QNLLQMMQHYG-P--HVLQKRAEVTEPRC

LYK----PTRT-TS-QC-KAVPPDSGKSICICDNLSELLMAMQDELDQMSMEHQE---LLNQMKETESHSAF

ENIECELEHLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKT-SEASGIQREDSNPNTSKNVKNS--PR

KCLPANP-LQK-NSNFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_004422251.2/1-487 PREDICTED: centrosomal protein CEP57L1 isoform X4 [Ceratotherium simum simum]

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-----------------------------------------------MHTSLVYL-----------------

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-----------------------------------------------------------------FI-----

-----------------------------------------------MDPELMHSIV----GSYLKPP----

-E-------RV-FVPSFTQNDES-----TQTHH--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKYLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKCSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVVE-------K------SASAS-HSRNASR-QNLLQMMQHYG-P--HVLQKRAEVTEPRC

LYK----PTRT-TS-RC-EAVPPDSGKSVCICDNLSELLMAMQDELDQMSMEHQE---LLNQMKETESHSVF

ENIECELEHLVKKMEIKGEQISKLKKHQDNVH--KLQQKVQNSRT-SEASGIQQEDSNPNRSKNVKNT--PR

KCLPANP-LQK-NSNFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_058422486.1/1-516 centrosomal protein CEP57L1 isoform X1 [Diceros bicornis minor]

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-----------------------------------------------MPIFLYFIWDA--------------

-------------------------------------------------ATA----WL--------------

------DK-RCIGARPGS-EPANPGP------------------------------------PQRSI-----

-----------------------------------------------MDPELMHSIV----GSYLKPP----

-E-------RV-FVPSFTQNDES-----TQTHH--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKYLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKCSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVVE-------K------SASAS-HSRNASR-QNLLQMMQHYG-P--HVLQKRAEVTEPRC

LYK----PTRT-TS-QC-KAVPPDSGKSICICDNLSELLMAMQDELDQMSMEHQE---LLNQMKETESHSAF

ENIECELEHLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKT-SEASGIQREDSNPNTSKNVKNS--PR

KCLPANP-LQK-NSNFHPIR-VHNLQMKLRRDDIMWEQ

>KAJ8788693.1/1-450 hypothetical protein J1605\_022438 [Eschrichtius robustus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSVTQSDES-----SQTHY--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVSNPKCSKE---KKKSS-------------------------------------

----------------------K------SASAG-HSRNAST-QN-LQTMQHYR-P--HILQKLAEVSEPRC

LYK----PSRT-TS-QC-EAVPSDSEKSISICNNLSELLMAMQDELDQMSMEYQD---LLNQMKETESQSVC

ENIECELEHLVKKMEIKGEQISKLMKHQDSVR--KLQQKVQNSKM-SEASAIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQK-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>XP\_032507489.1/1-476 centrosomal protein CEP57L1 isoform X1 [Phocoena sinus]

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-----------------------------------------------MDFELMHSIV----GSYLKPP----

-E-------RV-FVPSIAQSDES-----SQTHY--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEYETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSISNPKRSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNAST-QN-LQTMQHYR-P--HSLQKLAEVSEPRC

LYK----PSKS-TS-QC-EAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECELEYLVKKMEIKGEQISKLMKHQDNVR--KLQQKVQNLKI-SEASAIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQN-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>XP\_024611566.1/1-476 centrosomal protein CEP57L1 isoform X1 [Neophocaena asiaeorientalis asiaeorientalis]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSIAQSDES-----SQTHY--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEYETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSISNPKRSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNAST-QN-LQTMQHYR-P--HSLQKLAEVSEPRC

LYK----PSKS-TS-QS-EAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECELEYLVKKMEIKGEQISKLMKHQDNVR--KLQQKVQNLKI-SEASAIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQN-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>XP\_029079750.1/1-476 centrosomal protein CEP57L1 [Monodon monoceros]XP\_029079751.1 centrosomal protein CEP57L1 [Monodon monoceros]XP\_029079752.1 centrosomal protein CEP57L1 [Monodon monoceros]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSIAQSDES-----SQTHY--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEQEKNMILEQK------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSISNPKRSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNTST-QN-LQTMQHYR-P--HILQKLAEVSEPRC

LYK----PSKS-TS-QC-EAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKVQNLKI-SEASAIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQN-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>XP\_022409709.1/1-476 centrosomal protein CEP57L1 isoform X1 [Delphinapterus leucas]XP\_022409719.1 centrosomal protein CEP57L1 isoform X1 [Delphinapterus leucas]XP\_022409742.1 centrosomal protein CEP57L1 isoform X1 [Delphinapterus leucas]XP\_030616155.1 centrosomal protein CEP57L1 isoform X1 [Delphinapterus leucas]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSIAQSDES-----SQTHY--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEQEKNMILEQK------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLKTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSISNPKRSKE---KKKSSK--------------------------KSKCLKRGPP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNAST-QN-LQTVQHYR-P--HILQKLAEVSEPRC

LYK----PSKS-TS-QC-EAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKEAESQSVC

ENIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKVQNLKI-SEASAIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQN-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>XP\_061063702.1/1-476 centrosomal protein CEP57L1 isoform X1 [Eubalaena glacialis]XP\_061063703.1 centrosomal protein CEP57L1 isoform X1 [Eubalaena glacialis]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSVTQSDES-----SQTHY--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRIFMSSVSNPKCSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNAST-QN-LQTMQHYR-P--HILQKLAEVSEPRC

LYK----PSRT-TS-QC-EAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECELEHLVKKMEIKGEQISKLMKHQDSVR--KLQQKVQNSKM-SEASAIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQK-NRNFRPVR-VHNLQMKLRRDDIMWEQ

>XP\_036727945.1/1-476 centrosomal protein CEP57L1 isoform X1 [Balaenoptera musculus]XP\_036727946.1 centrosomal protein CEP57L1 isoform X1 [Balaenoptera musculus]XP\_036727947.1 centrosomal protein CEP57L1 isoform X1 [Balaenoptera musculus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSVTQSDES-----SQTHY--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVSNPKCSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNAST-QN-LQTMQHYR-P--RILQKLAEVSEPRC

LYK----PSRT-TS-QC-EAVPSDSEKSISICNNLSELLMAMQDELDQMSMEYQD---LLNQMKETESQSVC

ENIECELEHLVKKMEIKGEQISKLMKHQDSVR--KLQQKVQNSKM-SEASAIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQK-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>XP\_007190728.2/1-476 centrosomal protein CEP57L1 isoform X1 [Balaenoptera acutorostrata]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSVTQSDES-----SQTHY--SV-----NLEVTSSKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVSNPKCSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNAST-QN-LQTMQHYR-P--HILQKLAEVSEPRC

LYK----PSRT-TS-QC-EAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECELEHLVKKMEIKGEQISKLMKHQDSVR--KLQQKVQNSKM-GEASTIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQK-NSNLRPIR-VHNLQMKLRRDDIMWEQ

>XP\_058939611.1/1-476 centrosomal protein CEP57L1 [Kogia breviceps]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSITQSDES-----SQTHY--SV-----NLEVTSPKMLHGPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVSNPKRSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNAST-QN-LQTMQHYR-P--HILQKLAEVSEPRC

LYK----PSRK-TS-QC-EAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECELEHLVKKMEIKGEQISKLMKHQDSVH--KLQQKVQNLKM-SEASAIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQK-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>XP\_007100608.1/1-476 centrosomal protein CEP57L1 [Physeter catodon]XP\_028350365.1 centrosomal protein CEP57L1 [Physeter catodon]XP\_028350366.1 centrosomal protein CEP57L1 [Physeter catodon]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSITQSDES-----SQTHY--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLEVERTQAEDHLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQVEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLRAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVSNPKRSKE---KKKSSK--------------------------KTKCLKRGSP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNAST-QN-LQTMQHYR-P--HILQKLAEVSEPRC

LYK----PSRK-TS-QC-EAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECELEHLVKKMEIKGEQISKLMKHQDSVH--KLQQKVQNLKM-SEASAIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQK-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>XP\_026944978.1/1-476 centrosomal protein CEP57L1 isoform X1 [Lagenorhynchus obliquidens]XP\_026944982.1 centrosomal protein CEP57L1 isoform X1 [Lagenorhynchus obliquidens]

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-----------------------------------------------MDSELMHSIV----GSYRKPP----

-E-------RV-FVPSIAQSVES-----SQTHY--SV-----NLEVTSPKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFILTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTELEISRILMSSVSNPKRSKE---KKKSSK--------------------------KTKCLKRGPP

QHIYSKFGSLPIVAE-------K------SASAG-HSRNAST-PN-LQTMQHYR-P--HILQKLAEVSEPRC

LYK----PSKS-TS-QC-EAVPSDSERSISVCNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECELEHLVKKMEIKGEQISKLMKHQDNVR--KLQQKVQNLKI-SEASAIQKEDSNYKGSKNIKNS--PR

KCLLTNS-PQK-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>XP\_019785105.1/1-476 centrosomal protein CEP57L1 isoform X1 [Tursiops truncatus]XP\_033723499.1 centrosomal protein CEP57L1 isoform X1 [Tursiops truncatus]XP\_060023439.1 centrosomal protein CEP57L1 isoform X1 [Lagenorhynchus albirostris]XP\_060023440.1 centrosomal protein CEP57L1 isoform X1 [Lagenorhynchus albirostris]XP\_060023441.1 centrosomal protein CEP57L1 isoform X1 [Lagenorhynchus albirostris]

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-----------------------------------------------MDSELMHSIV----GSYRKPP----

-E-------RV-FVPSIAQSVES-----SQTHY--SV-----NLEVTSPKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTELEISRILMSSVSNPKRSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNAST-PN-LQTMQHYR-P--HILQKLAEVSEPRC

LYK----PSKS-TS-QC-EAVPSDSEKSISVCNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECELEHLVKKMEIKGEQISKLMKHQDNVC--KLQQKVQNLKM-SEASAIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQK-NSNFPPIR-VHNLQMKLRRDDIMWEQ

>XP\_030738746.1/1-476 centrosomal protein CEP57L1 isoform X1 [Globicephala melas]XP\_030738747.1 centrosomal protein CEP57L1 isoform X1 [Globicephala melas]XP\_060139474.1 centrosomal protein CEP57L1 [Globicephala melas]

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-----------------------------------------------MDSELMHSIV----GSYRKPP----

-E-------RV-FVPSIAQSVES-----SQTHY--SV-----NLEVTSPKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTELEISRILMSSVSNPKRSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNAST-PN-LQTMQHYR-P--HILQKLAEVSEPRC

LYK----PSKS-TS-QC-EAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECELEHLVKKMEIKGEQISKLMKHQDNVC--KLQQKVQNLKM-SEASAIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQK-NSNFPPIR-VHNLQMKLRRDDIMWEQ

>TEA38723.1/1-476 hypothetical protein DBR06\_SOUSAS610069 [Sousa chinensis]

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-----------------------------------------------MDSELMHSIV----GSYRKPP----

-E-------RV-FVPSIAQSVES-----SQTHY--SV-----NLEVTSPKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTELEISRILMSSVSNPKRSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNAST-PN-LQTMQHYR-P--HILQKLAEVSEPRC

LYK----PSKS-TS-QC-EAVPSDSEKSISVCNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECELDHLVKKMEIKGEQISKLMKHQDNVC--KLQQKVQNLKM-SEASAIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQK-NSNFPPIR-VHNLQMKLRRDDIMWEQ

>XP\_059886108.1/1-476 centrosomal protein CEP57L1 isoform X1 [Delphinus delphis]

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-----------------------------------------------MDSELMHSIV----GSYRKPP----

-E-------RV-FVPSIAQSVES-----SQTHY--SV-----NLEVTSPKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTELEISRILMSSVSNPKRSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNAST-PN-LQTMQHYR-P--HILQKLAEVSEPRC

LYK----PSKS-TS-QC-EAVPSDSEKSISVCNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECELEHLVKKMEIKGEQISKLMKHQDNVC--KLQQKVQNLKM-SEASAIQKEDSNRKGSKNIKNS--PR

KCLLTNS-PQK-NSNFPPIR-VHNLQMKLRRDDIMWEQ

>XP\_004264790.1/1-476 centrosomal protein CEP57L1 isoform X1 [Orcinus orca]

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-----------------------------------------------MDSELMHSIV----GSYRKPP----

-E-------RV-FVPSIAQSVES-----SQTHY--SV-----NLEVTSPKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTELEISRILMSSVSNPKRSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPIVAE-------K------SASAG-HSRNAST-PN-LQTMQHYR-P--HILQKLAEVSEPRC

LYK----PSKS-TS-QC-EAVPSDSEKSISVCNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECELEHLVKKMEIKGEQISKLMKHQDNVC--KLQQKVQNLKI-SEASAIQKEDSNCKGSKNIKNS--PR

KCLLTNS-PQK-NSNFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_059970653.1/1-476 centrosomal protein CEP57L1 isoform X1 [Mesoplodon densirostris]XP\_059970654.1 centrosomal protein CEP57L1 isoform X1 [Mesoplodon densirostris]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSITQSDES-----SQTHY--SV-----NIEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLDLERTQAEDNLKILSREAAQYKKALEDETKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSLSNPKRSKE---KKKSSK--------------------------KTKCLKGGPP

PQIYSKFGSLPIVAE-------K------SASAG-HSRNART-QN-LQTMQHYR-P--HILQKLAEVSEPRC

LYK----PSRT-TS-QC-EDVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

ENIECALEHLVKKMEIKGEQISKLMKHQDSVR--KLQQKVQNLKM-SEASAIQKEDSNCNGSKNIKNS--PR

KCFLTNS-PQK-SSNFRPIG-VHNLQMKLRRDDIMWEQ

>XP\_057593912.1/1-478 centrosomal protein CEP57L1 isoform X3 [Hippopotamus amphibius kiboko]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSITQSDES-----SQTHY--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIRRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHEELIKQKKDISMQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKIAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVSNPKRSKE---KKKSSK--------------------------KTKCLKRGPH

QQIYSKFRSLPIVPE-------K------SASAS-HSVNSST-QN-LETMQHYG-P--HILQKPAEVTEPGC

LYK----PSRT-TS-QC-KAVPSDSEKSISICNNLSELLMAMQNELDQMTTEYQD---LLNQMKETESQSVC

EDIECELEHLVKKMEIKGEQISRLMKHQDSVR--KLQQKVQNSKM-NEASATQQEDSNCKGSKNIKNS--PR

RCLLTNC-LQK-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>KAB0355585.1/1-460 hypothetical protein FD755\_021526 [Muntiacus reevesi]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSVTQSDES-----SQTRY--SV-----NLEVTSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCIFLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEINRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCLKRRPS

QQICSKFGTLPIMAE-------K------SASAS-HSANAST-QN-LQTVPHYG-P--HILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICNNL----------------EYQD---LLNQMKETESQSVY

EDIECELERLVKKMEIKGEQISKLMQHQDSVR--KLQQKVQNSKR-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NSNFRPIQ-VHNLQMKLRRDDIMWEQ

>XP\_005905906.1/1-461 PREDICTED: centrosomal protein CEP57L1 isoform X2 [Bos mutus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RVMCVPSITQSDES-----SQTHY--SV-----NLELTSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLAKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVTNPRHFKE---KKKSSK--------------------------KIKCLKRRPP

QQICSKFETLPIMAE-------K-------------------------VRQHSG-P--HILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICHNLSELLMAMQDELDQMTMGYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQESVR--KLQQKVQNSKM-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NNNCRPVR-VHNLQMKLRRDDIMWEQ

>XP\_005684649.1/1-476 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Capra hircus]XP\_005684650.1 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Capra hircus]XP\_013821896.1 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Capra hircus]KAJ1058520.1 hypothetical protein K5549\_008640 [Capra hircus]

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-----------------------------------------------MNSELMHSIV----GSYLKPP----

-E-------RV-CVPSVTQSDES-----SQTHY--SV-----NLEVTSSKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCLKRGPP

QQICSKFGTLPIMTE-------K------SASAS-HSANAST-QN-LQTVQHSG-P--RILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICNNLSELLMAMRDELDQMTMEYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQDSVH--KLQQKVQNSKM-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NSNCRPIR-VHNLQMKLRRDDIMWEQ

>XP\_052501864.1/1-476 centrosomal protein CEP57L1 [Budorcas taxicolor]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSVTQSDES-----SQTHY--SV-----NLEVTSSKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LRSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLEKLDVLEKECFKLTATQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCLKRGPP

QQICSKFGTLPIMAE-------K------SASAS-HSANAST-QN-LQTVQHSG-P--RILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQDSVR--KLQQKVQNSKM-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NSNCRPIR-VHNLQMKLRRDDIMWEQ

>XP\_040094470.1/1-478 centrosomal protein CEP57L1 isoform X1 [Oryx dammah]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSVTQSDES-----SQTHY--SV-----NLEVTSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCLKRGPP

QQICSKFGTLPIMAE-------K------SASAS-HSADAST-QN-LQTVQHSG-P--RILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICNNLSELLMAMQDELDQMTIEYQD---LLNQMKETESQSVC

EDIECELECLVKKMEIKGEQISKLMQHQDSVR--KLQQKVQNSKM-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NSNCRPIR-VHNLQMKLRQDDIMWEQ

>XP\_020732270.1/1-476 centrosomal protein CEP57L1 isoform X1 [Odocoileus virginianus texanus]XP\_020732271.1 centrosomal protein CEP57L1 isoform X1 [Odocoileus virginianus texanus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSVTQSDES-----SQTRY--SV-----NLEVTSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEINRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCLKRGPS

QQICSKFGTLPIMAE-------K------SARAS-HSANAST-QN-LQTVPHYG-P--HILQKPAEVTEFRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICNNLSELLMAMQDELDQMTREYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQDSVR--KLQQTVQNSKM-SETSAIQQEDSNCKGTKNIKNS--PR

KCLLTNS-LQK-NSNFRPIR-VHNLQMKLRQDDIMWEQ

>CAI9164227.1/1-476 unnamed protein product [Rangifer tarandus platyrhynchus]CAI9701787.1 unnamed protein product [Rangifer tarandus platyrhynchus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSVTQSDES-----SQTRY--SV-----NLEVTSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEINRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCLKRGPS

QQICSKYGTLPIMAE-------K------SARAS-HSANAST-QN-LQTVPHYG-P--HILQKPAEVTEFRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

EDIDCELERLVKKMEIKGEQISKLMQHQDNVR--KLQQKVQNSKM-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NSNFRPIR-VHNLQMKLRQDDIMWEQ

>XP\_043295128.1/1-478 centrosomal protein CEP57L1 isoform X1 [Cervus canadensis]XP\_043746006.1 centrosomal protein CEP57L1 isoform X1 [Cervus elaphus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSVTQSDES-----SQTRY--SV-----NLEVTSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMRLHAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEINRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCLRRGPS

QQICSKFGTLPIVAE-------K------SASAS-HSANAST-QN-LQTVPHYG-P--HILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQDSVR--KLQQKVQNSKM-SETSAIQQEDGNCKGTKNIKNS--SR

KCLLTNS-LQK-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>XP\_060987595.1/1-478 centrosomal protein CEP57L1 isoform X1 [Dama dama]XP\_060987596.1 centrosomal protein CEP57L1 isoform X2 [Dama dama]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSVTQSDES-----SQTRY--SV-----NLEVTSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEINRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCLKRGPS

QQICSKFGTLPIMAE-------K------SASAS-HSANAST-QN-LKTVPHYG-P--HILQQPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQDSVR--KLQQKVQNSKM-SETSALQQEDGNCKGTKNIKNS--SR

KCLLTNS-LQK-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>KAB0346858.1/1-476 hypothetical protein FD754\_011715 [Muntiacus muntjak]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSVTQSDES-----SQTRY--SV-----NLEVTSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCIFLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEINRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCLKRRPS

QQICSKFGTLPIMAE-------K------SASAS-HSANAST-QN-LQTVPHYG-P--HILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQDSVR--KLQQKVQNSKM-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NSNFRPIQ-VHNLQMKLRRDDIMWEQ

>XP\_055289516.1/1-476 centrosomal protein CEP57L1 [Moschus berezovskii]XP\_055289517.1 centrosomal protein CEP57L1 [Moschus berezovskii]XP\_055289518.1 centrosomal protein CEP57L1 [Moschus berezovskii]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSVTQSDES-----SQTHY--SV-----NLEVTSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNVLSREAAQYKKALENETCERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKKMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLEKLDVLEKECFKLTATQKTAEDKIKHLEEKLKEEEHQRKLFQD

KAAQLQTGLEINRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCIKRGPP

QQICSQFGTLPVTAE-------K------SASAS-HSVNAST-QN-LQTVQHYG-P--HILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISVCNNLSELLMAMQDELDQMTLEYQD---LLNQMKETESQSVC

EDIACELERLVKKMEIKGEQISKLMQHQDSVR--KLQQKVQNSKM-SETSFIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NSHFRPNQ-VHNLQMKLRRDDIMWEQ

>NP\_001039709.1/1-476 centrosomal protein CEP57L1 [Bos taurus]XP\_005210841.1 centrosomal protein CEP57L1 isoform X1 [Bos taurus]XP\_027407060.1 centrosomal protein CEP57L1 isoform X1 [Bos indicus x Bos taurus]XP\_027407061.1 centrosomal protein CEP57L1 isoform X1 [Bos indicus x Bos taurus]XP\_059745676.1 centrosomal protein CEP57L1 isoform X1 [Bos taurus]XP\_059745677.1 centrosomal protein CEP57L1 isoform X1 [Bos taurus]AAI14171.1 Chromosome 6 open reading frame 182 ortholog [Bos taurus]DAA26256.1 TPA: hypothetical protein LOC519522 [Bos taurus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSITRSDES-----SQTHY--SV-----NLELTSSQMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLAKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVTNPRHFKE---KKKSSK--------------------------KIKCLKRRPP

QQICSKFETLPIMAE-------K------SASAS-HSANAST-HS-LQTVQHSG-P--HILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICHNLSELLMAMQDELDQMTMGYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQESVR--KLQQKVQNSKM-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NNNCRPIR-VHNLQMKLRRDDIMWEQ

>XP\_010854934.1/1-476 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Bison bison bison]XP\_010854935.1 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Bison bison bison]XP\_061283627.1 centrosomal protein CEP57L1 isoform X1 [Bos javanicus]XP\_061283628.1 centrosomal protein CEP57L1 isoform X1 [Bos javanicus]XP\_061283629.1 centrosomal protein CEP57L1 isoform X1 [Bos javanicus]XP\_061283630.1 centrosomal protein CEP57L1 isoform X1 [Bos javanicus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSITQSDES-----SQTHY--SV-----NLELTSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLAKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVTNPRHFKE---KKKSSK--------------------------KIKCLKRRPP

QQICSKFETLPIMAE-------K------SASAS-HSANAST-HS-LQTVQHSG-P--HILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICHNLSELLMAMQDELDQMTMGYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQESVR--KLQQKVQNSKM-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NNNCRPIR-VHNLQMKLRRDDIMWEQ

>XP\_005905905.1/1-477 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Bos mutus]ELR48999.1 Cep57-related protein [Bos mutus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RVMCVPSITQSDES-----SQTHY--SV-----NLELTSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLAKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVTNPRHFKE---KKKSSK--------------------------KIKCLKRRPP

QQICSKFETLPIMAE-------K------SASAS-HSANAST-HS-LQTVQHSG-P--HILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICHNLSELLMAMQDELDQMTMGYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQESVR--KLQQKVQNSKM-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NNNCRPVR-VHNLQMKLRRDDIMWEQ

>XP\_019822815.1/1-476 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Bos indicus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSITQSDES-----SQTHY--SV-----NLELTSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLAKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVTNPRHFKE---KKKSSK--------------------------KIKCLKRRPP

QQICSKFETLPIMAE-------K------SASAS-XSANAST-HS-LQTVQHSG-P--HILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICHNLSELLMAMQDELDQMTMGYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQESVR--KLQQKVQNSKM-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NNNCRPIR-VHNLQMKLRRDDIMWEQ

>MXQ85630.1/1-489 hypothetical protein [Bos mutus]

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-------S-E--------------------------------------------------------I-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSITQSDES-----SQTHY--SV-----NLELTSSKMLRSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLAKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVTNPRHFKE---KKKSSK--------------------------KIKCLKRRPP

QQICSKFETLPIMAE-------K------SASAS-HSANAST-HS-LQTVQHSG-P--HILQKPAEVTELRC

LYK----PSRI-TS-QC-KAVPSDSEKSISICHNLSELLMAMQDELDQMTMGYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQESVR--KLQQKVQNSKM-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NNNCRPVR-VHNLQMKLRRDDIMWEQ

>XP\_055391226.1/1-476 centrosomal protein CEP57L1 [Bubalus carabanensis]XP\_055391228.1 centrosomal protein CEP57L1 [Bubalus carabanensis]XP\_055391229.1 centrosomal protein CEP57L1 [Bubalus carabanensis]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSVTQSDES-----SQTHY--SV-----NLEVTSSKMLRSPN-------SQ-------

-------ALILALRTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLAKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCLKRRPP

QQICSKFGTLPIMAE-------K------SASAS-HSENAST-QS-LQTVQHSG-P--HILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVHSDSEKSISICHNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQETVR--KLQQKVQNSKM-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NNNCRPIR-VHNLQMKLRRDDIMWEQ

>XP\_006075526.4/1-484 centrosomal protein CEP57L1 isoform X1 [Bubalus bubalis]

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-------T-ESVG----------------------------------------------------LI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSVTQSDES-----SQTHY--SV-----NLEVTSSKMLRSPN-------SQ-------

-------ALILALRTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLAKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCLKRRPP

QQICSKFGTLPIMAE-------K------SASAS-HSENAST-QS-LQTVQHSG-P--HILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVHSDSEKSISICHNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

EDIECELEHLVKKMEIKGEQISKLMQHQETVR--KLQQKVQNSKM-SETSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NNNCRPIR-VHNLQMKLRRDDIMWEQ

>XP\_060275490.1/1-490 centrosomal protein CEP57L1 isoform X1 [Ovis aries]

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-------T-HKAN---------------------------------------------------FWR-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSVTQSDES-----SQTHY--SV-----NLEVTSSKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCLKRGPP

QQICSKFGTLPIIAE-------K------SASAS-HSANAST-QN-LQTVQHSG-P--RILQKPAEVTELRC

LYK----TSRT-TS-QC-KAVPSDSEKSISIYNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQDSVR--RLQQKVQNSKM-SKTSAIQQEDSNCKGTKNIKNS--SR

KCLLTNS-LQK-NSNCRPIR-VHNLQMKLRRDDIMWEQ

>XP\_031536026.1/1-486 centrosomal protein CEP57L1 isoform X1 [Vicugna pacos]

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-------------------ESSNSNR-------------------------------------DAMI-----

-----------------------------------------------MDSELMHSIV----GSYLRPP----

-E-------RV-FVPSFTQSDES-----S--HY--SM-----NLEVTATKMLHSPN-------SQ-------

-------AIILALKTLQEKIHRLELERTQAEDNLNVISREAAQYKKALENETNERNLAHQELIKQKKDISMQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTSEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEINRILMSSASNPKHFNE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSQPIVAE-------K------SASAS-HSLNPSM-QNLLQTTQHYR-T--HTLQKPAEVAEPAC

LHK----PSRT-TS-QC-KALPSDSEKSISICNNLSELLMAMQDELDQMSMEYQE---LLNQIKETESQSVC

EDIECKLEHLAKKMEIKGEQISKLMKHQDSVH--KLQQKVYNSKM-SETSAIQQEDGNCKGSKNIKN----R

NCWLSNS-LQK-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>XP\_032340562.1/1-488 centrosomal protein CEP57L1 isoform X1 [Camelus ferus]XP\_032340563.1 centrosomal protein CEP57L1 isoform X1 [Camelus ferus]

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-------------------ESSNSNR-------------------------------------DAMI-----

-----------------------------------------------MDSELMHSIV----GSYLRPP----

-E-------RV-FVPSFTQSDES-----S--HY--SM-----NLEVTATKMLHSPN-------SQ-------

-------AIILALKTLQEKIHRLELERTQAEDNLNVISREAAQYKKALENETNERNLAHQELIKQKKDISMQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTSEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEINRILMSSASNPKHFNE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSQPIVAE-------K------SASAS-HSLNPSM-QNLLQTTQHYR-T--HTLQKPAEVAEPAC

LHK----PSRT-TS-QC-KALHSDSEKSISICNNLSELLMAMQDELDQMSMEYQE---LLNQIKETESQSVC

EDIECKLERLVKKMEIKGEQISKLMKHQDSVH--KLQQKVHNSKM-SETSAIQQEDGNCKGSKNIKNS--PR

NCWLSNS-LQK-NSNFRPIQ-VHNLQMKLRRDDIMWEQ

>XP\_031311996.1/1-488 centrosomal protein CEP57L1 isoform X1 [Camelus dromedarius]

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---------------------------------------------------MQ-------------------

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-------------------ESSNSNR-------------------------------------DAMI-----

-----------------------------------------------MDSELMHSIV----GSYLRPP----

-E-------RV-FVPSFTQSDES-----S--HY--SM-----NLEVTATKMLHSPN-------SQ-------

-------AIILALKTLQEKIHRLELERTQAEDNLNVISREAAQYKKALENETNERNLAHQELIKQKKDISMQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTSEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEINRILMSSASNPKHFNE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSQPIVAE-------K------SASTS-HSLNPSM-QNLLQTTQHYR-T--HTLQKPAEVAEPAC

LHK----PSRT-TS-QC-KALHSDSEKSISICNNLSELLMAMQDELDQMSMEYQE---LLNQIKETESQSVC

EDIECKLERLVKKMEIKGEQISKLMKHQDSVH--KLQQKVHNSKM-SETSAIQQEDGNCKGSKNIKNS--PR

NCWLSNS-LQK-NSNFRPIQ-VHNLQMKLRRDDIMWEQ

>XP\_010963698.2/1-473 LOW QUALITY PROTEIN: centrosomal protein CEP57L1 [Camelus bactrianus]

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---------------------------------------------------MQ-------------------

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-------------------ESSNSNR-------------------------------------DAMI-----

-----------------------------------------------MDSELMHSIV----GSXIRPP----

-------------------------------XY--SM-----NLEVTATKMLHSPN-------SQ-------

-------AIILALKTLQEKIHRLELERTQAEDNLNVISREAAQYKKALENETNERNLAHQELIKQKKDISMQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTSEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEINRILMSSASNPKHFNE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSQPIVAE-------K------SASAS-HSLNPSM-QNLLQTTQHYR-T--HTLQKPAEVAEPAC

LHK----PSRT-TS-QC-KALHSDSEKSISICNNLSELLMAMQDELDQMSMEYQE---LLNQIKETESQSVC

EDIECKLERLVKKMEIKGEQISKLMKHQDSVH--KLQQKVHNSKM-SETSAIQQEDGNCKGSKNIKNS--PR

NCWLSNS-LQK-NSNFRPIQ-VHNLQMKLRRDDIMWEQ

>XP\_013848197.1/1-487 centrosomal protein CEP57L1 isoform X2 [Sus scrofa]

---------------------------------------------------------MDGRK----------

--------------------------------------------------EL--------------------

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-------H-K--------------------------------------------------------I-----

-----------------------------------------------MDSELMHSIV----GSYLNPP----

-E-------RV-FVPSFTQSNES-----SQTHY--SV-----NLEVTSPKMLRSPN-------NQ-------

-------ALILALKTLQEKIYRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKDMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLAINRILMASASNPKCSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPVVAE-------K------SASAS-HSVNAST-QNLLQTMQHYG-P--HILQKPAKVIEPRY

LYK----PSRT-TS-QC-KAVPSDSEKSISICDNLSELLMAMQDELDQMSIEYQE---LLSQMKETESQSVC

EDIECELEHLVKKMEIKGERISKLMKHQDSVR--KLQQKVQSSKM-SEASAIQQEDSNLKGSKNIKNS--PR

KCLLTNS-LQK-NSSFHPIR-VHNLQMKLRRDDILWEQ

>XP\_047618303.1/1-519 centrosomal protein CEP57L1 isoform X1 [Phacochoerus africanus]

---------------------------------------------------------MVGKS----------

--------------------------------------------------CV--------------------

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-------R-SGKRDAVET-SAPRCYLC------FCSVRWAHPG-----------------WTQYPCI-----

-----------------------------------------------MDSELMHSIV----GNYLNPP----

-E-------RV-FVPSFTQSNES-----SQTHY--SV-----NLEVTSPKMLRSPN-------NQ-------

-------ALILALKTLQEKIYRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKDMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLAINRILMASVSNPKCSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPVVAE-------K------SASAS-HSVNAST-QNLLQTMQHYG-P--HILQKPAKVIEPRY

LYK----PSRT-TS-QC-KAVPSDSEKSISICDNLSELLMAMQDELDQMSIEYQE---LLSQMKETESQSVC

EDIECELEHLVKKMEIKGERISKLMKHQDSVR--KLQQKVQSSKM-SEASAIQQQDSNLKGSKNIKNS--PR

KCLLTNS-LQK-NSSFHPIR-VHNLQMKLRRDDILWEQ

>XP\_013848196.1/1-519 centrosomal protein CEP57L1 isoform X1 [Sus scrofa]

---------------------------------------------------------MVGKS----------

--------------------------------------------------CI--------------------

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-------R-SGKRDAVET-SAPRCYLC------FCSVRWAHAG-----------------WTQYPCI-----

-----------------------------------------------MDSELMHSIV----GSYLNPP----

-E-------RV-FVPSFTQSNES-----SQTHY--SV-----NLEVTSPKMLRSPN-------NQ-------

-------ALILALKTLQEKIYRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKDMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLAINRILMASASNPKCSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPVVAE-------K------SASAS-HSVNAST-QNLLQTMQHYG-P--HILQKPAKVIEPRY

LYK----PSRT-TS-QC-KAVPSDSEKSISICDNLSELLMAMQDELDQMSIEYQE---LLSQMKETESQSVC

EDIECELEHLVKKMEIKGERISKLMKHQDSVR--KLQQKVQSSKM-SEASAIQQEDSNLKGSKNIKNS--PR

KCLLTNS-LQK-NSSFHPIR-VHNLQMKLRRDDILWEQ

>XP\_032959462.1/1-486 centrosomal protein CEP57L1 isoform X7 [Rhinolophus ferrumequinum]XP\_032959463.1 centrosomal protein CEP57L1 isoform X7 [Rhinolophus ferrumequinum]XP\_032959464.1 centrosomal protein CEP57L1 isoform X7 [Rhinolophus ferrumequinum]XP\_032959465.1 centrosomal protein CEP57L1 isoform X7 [Rhinolophus ferrumequinum]XP\_032959467.1 centrosomal protein CEP57L1 isoform X7 [Rhinolophus ferrumequinum]XP\_032959468.1 centrosomal protein CEP57L1 isoform X7 [Rhinolophus ferrumequinum]XP\_032959469.1 centrosomal protein CEP57L1 isoform X7 [Rhinolophus ferrumequinum]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFIQSDES-----SQNHY--SV-----NFGVSAVKMLPSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKQALENETNERNLVHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEKEHQRKLFQD

KASELQTGLEINRILMSSVSNPKRSRE---KKKSSK--------------------------KTKCLKRGAS

QQVYSKFGSLPIVAEKVRGAKTK------SASAS-HSVNASM-QNLLQMMQHYG-P--HILQKPPAVTEPRC

LYK----PTRT-TS-HC-KAVPPDPEKSISICDNLSELLMAMQDEFDQMSMEHRK---LLNQMEETESRSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDSVR--KLQQKIQNSKM-SDASGIQREDSNPKGSKNIKNS--PR

KCLLTNS-PQK-NSNFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_019590544.1/1-486 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Rhinolophus sinicus]XP\_019590545.1 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Rhinolophus sinicus]XP\_019590546.1 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Rhinolophus sinicus]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-CVPSFIQSDES-----SQNHH--SV-----NFGVTAAKMLPTPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKQALEIETNERNLVHQELIKQKKDISIQ

LSSAQCRCTFLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEKEHQRKLFQD

KASELQTGLEINRILMSSVSNPKRSRE---KKKSAK--------------------------KPKCLKRGAS

QQVCSKFGSLPVVAEKVRGAKTK------SASAS-RSVNASM-QNLLQMMQHYG-P--HILQKPPEVTEPRC

LYK----PTRK-TS-HC-KAVPPDPEKSISICDNLSELLMAMQDELDQMSMEHRK---LLNQMEETESRSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDSVR--KLQQKFQNSKM-SDTSGIQREDSNPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_032959458.1/1-513 centrosomal protein CEP57L1 isoform X3 [Rhinolophus ferrumequinum]

--------------------------------------------------------------------MPGV

L----------------------------------------------EDGCLE-------------------

-------------------------------------------------------VW---------------

-------S-H----LVFW-ITDVK--------------------------------------WSGYI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFIQSDES-----SQNHY--SV-----NFGVSAVKMLPSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKQALENETNERNLVHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEKEHQRKLFQD

KASELQTGLEINRILMSSVSNPKRSRE---KKKSSK--------------------------KTKCLKRGAS

QQVYSKFGSLPIVAEKVRGAKTK------SASAS-HSVNASM-QNLLQMMQHYG-P--HILQKPPAVTEPRC

LYK----PTRT-TS-HC-KAVPPDPEKSISICDNLSELLMAMQDEFDQMSMEHRK---LLNQMEETESRSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDSVR--KLQQKIQNSKM-SDASGIQREDSNPKGSKNIKNS--PR

KCLLTNS-PQK-NSNFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_019514536.1/1-479 PREDICTED: centrosomal protein CEP57L1 isoform X3 [Hipposideros armiger]XP\_019514537.1 PREDICTED: centrosomal protein CEP57L1 isoform X3 [Hipposideros armiger]XP\_019514538.1 PREDICTED: centrosomal protein CEP57L1 isoform X3 [Hipposideros armiger]XP\_019514539.1 PREDICTED: centrosomal protein CEP57L1 isoform X3 [Hipposideros armiger]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFTQIDES-----SQNHH--SV-----NFGVTAPKMLHSPN-------SQ-------

-------ALILALKSLQEKIHRLELERTQAEDNLNILSREAAQYKKALEIETNERNLVHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKSAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSASIPKGSKE---KKKSSK--------------------------KTKCLKRGTS

QQVYSKFGSLPVVAE-------K------SASAS-HSVNASM-QNLLQLMQHYG-P--HILRKPAEVAEPRC

LYK----PTRT-VS-QC-KAVPPDPEKSVSICDNLSELLMAMQDELDQMSMEHQK---LLNQMEETESRSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDSVR--KLQQKVQNSKM-SDASCIQQEDSNPKESKNIKNS--PR

KCSLTNS-LQK-NGNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_032959459.1/1-501 centrosomal protein CEP57L1 isoform X4 [Rhinolophus ferrumequinum]

--------------------------------------------------------MLLARSVCDRNYSPHK

P----------------------------------------------LRRCL--------------------

--------------------------------------------------------W---------------

-------R-RASRPLARW-ETES----------------------------------------VSLI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFIQSDES-----SQNHY--SV-----NFGVSAVKMLPSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKQALENETNERNLVHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEKEHQRKLFQD

KASELQTGLEINRILMSSVSNPKRSRE---KKKSSK--------------------------KTKCLKRGAS

QQVYSKFGSLPIVAE--------------------------------KMMQHYG-P--HILQKPPAVTEPRC

LYK----PTRT-TS-HC-KAVPPDPEKSISICDNLSELLMAMQDEFDQMSMEHRK---LLNQMEETESRSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDSVR--KLQQKIQNSKM-SDASGIQREDSNPKGSKNIKNS--PR

KCLLTNS-PQK-NSNFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_032959456.1/1-525 centrosomal protein CEP57L1 isoform X1 [Rhinolophus ferrumequinum]

--------------------------------------------------------MLLARSVCDRNYSPHK

P----------------------------------------------LRRCL--------------------

--------------------------------------------------------W---------------

-------R-RASRPLARW-ETES----------------------------------------VSLI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFIQSDES-----SQNHY--SV-----NFGVSAVKMLPSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKQALENETNERNLVHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEKEHQRKLFQD

KASELQTGLEINRILMSSVSNPKRSRE---KKKSSK--------------------------KTKCLKRGAS

QQVYSKFGSLPIVAEKVRGAKTK------SASAS-HSVNASM-QNLLQMMQHYG-P--HILQKPPAVTEPRC

LYK----PTRT-TS-HC-KAVPPDPEKSISICDNLSELLMAMQDEFDQMSMEHRK---LLNQMEETESRSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDSVR--KLQQKIQNSKM-SDASGIQREDSNPKGSKNIKNS--PR

KCLLTNS-PQK-NSNFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_019514533.1/1-517 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Hipposideros armiger]

---------------------------------------------------------MLARSVCDRDYSPHK

P----------------------------------------------LRRCL--------------------

--------------------------------------------------------W---------------

-------R-PGSRPLARS-ETES----------------------------------------VSLI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFTQIDES-----SQNHH--SV-----NFGVTAPKMLHSPN-------SQ-------

-------ALILALKSLQEKIHRLELERTQAEDNLNILSREAAQYKKALEIETNERNLVHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKSAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSASIPKGSKE---KKKSSK--------------------------KTKCLKRGTS

QQVYSKFGSLPVVAE-------K------SASAS-HSVNASM-QNLLQLMQHYG-P--HILRKPAEVAEPRC

LYK----PTRT-VS-QC-KAVPPDPEKSVSICDNLSELLMAMQDELDQMSMEHQK---LLNQMEETESRSVC

EDIECELEHLVKKMEIKGEQISKLMKHQDSVR--KLQQKVQNSKM-SDASCIQQEDSNPKESKNIKNS--PR

KCSLTNS-LQK-NGNFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_012575795.1/1-479 PREDICTED: centrosomal protein CEP57L1 [Condylura cristata]

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-----------------------------------------------MDSELMHSIV----GSYFKPP----

-E-------RV-FVPSFTQNKEA-----SQNHH--SV-----NLDVNATKMLHSPN-------SQ-------

-------ALVLALKSLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETNERNLAHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKSMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDILEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKCCKE---KKKSSK--------------------------KTKCLKKEPP

QQSYSKFGSLPFGTE---EGKMK------TTSANLHSTNTGM-QNLLEMMQHYG-P--RNLQKPADMTKPRC

LNE----P----TS-SC-KTILPDSKKSISTCDSLSELLMAMQDELDQMSMEHQD---LLNQMKDTESHLVS

EDIENELQHLVKKMRIKGEQISKLKKHQDSVR--KLQQKVHTSMM-NEASSIQREDSSPKASKDIRRS--PR

KCLLTNP-LQK-NSNFHPIQ-VHNLQMKLRKDDIMWEQ

>XP\_039725947.1/1-460 centrosomal protein CEP57L1 isoform X1 [Pteropus giganteus]XP\_039725952.1 centrosomal protein CEP57L1 isoform X1 [Pteropus giganteus]XP\_039725962.1 centrosomal protein CEP57L1 isoform X1 [Pteropus giganteus]XP\_039725971.1 centrosomal protein CEP57L1 isoform X1 [Pteropus giganteus]XP\_039725980.1 centrosomal protein CEP57L1 isoform X1 [Pteropus giganteus]XP\_039725990.1 centrosomal protein CEP57L1 isoform X1 [Pteropus giganteus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------SV-FVPSFTENDES-----SQNHH--SV-----NFEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEIETNERNLVHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNIILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEDKIKHLEEKLKEEEHHRKLFQD

KASELQTGLEINRILMSSVSNPKRSKE---KKKSSK--------------------------KTKCLKREPP

QQIYSKFESPPIAAE-------K-------------------------MVQHYG-P--HILQKPAEVIERRC

LYK----PTRT-TS-QC-KAVAPDSKKSISICDNLSELLVAMQDELDQMSIEHQE---LLNQMKEAESHSVC

EDLECELEHLVKKMKIKEEQISKLLKHQDSVR--KLQQKVQNPKM-SEASGIQREDNNPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPIR-VHNLQMKLRRDDIMWEQ

>KAF6504361.1/1-477 centrosomal protein 57 like 1 [Rousettus aegyptiacus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------SV-FVPSFTKNDES-----SENHH--SV-----NFDVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALETETNERNLVHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNIILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKSAEDKIKHLEEKLKEEEHHRKLFQN

KASELQTGLEINRILMSSVSNPKRSKE---KKKSSK--------------------------KTKCLKREPP

QQIYSKFESPHIAAE-------K------SASAS-HSVNASI-QNLLQMVQHYG-P--HILQKPAEVIECRC

LYK----PTRA-AS-QH-KAVAPDSKKSIPICDNLSELLVAMQDELDQMSIEHQE---LLNQMKEAESHSVC

EDLECELEHLVKKMKIKEEQISKLLKHQDSIH--KLQQKIQNPKM-SEASGVQREDNKPKGSKNIKNS--PR

NCLLTNS-LQK-NSDFHPVR-VHNLQMKLRRDDIMWEQ

>XP\_011363144.1/1-501 centrosomal protein CEP57L1 isoform X1 [Pteropus vampyrus]

--------------------------------------------------------MLPAHSICDRNYSPQE

P----------------------------------------------LRRCL--------------------

--------------------------------------------------------W---------------

-------R-PAIQPLART-VFESVG----------------------------------------LI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------SV-FVPSFTENDES-----SQNHH--SV-----NFEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEIETNERNLVHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNIILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEDKIKHLEEKLKEEEHHRKLFQD

KASELQTGLEINRILMSSVSNPKRSKE---KKKSSK--------------------------KTKCLKREPP

QQIYSKFESPPVAAE-------K-------------------------MVQHYG-P--HILQKPAEVIERRC

LYK----PTRT-TS-QC-KAVAPDSKKSISICDNLSELLVAMQDELDQMSIEHQE---LLNQMKEAESHSVC

EDLECELEHLVKKMKIKEEQISKLLKHQDSVR--KLQQKVQNPKM-SEASGIQREDNNPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPIR-VHNLQMKLRRDDIMWEQ

>ELK00625.1/1-505 Cep57-related protein [Pteropus alecto]

--------------------------------------------------------MAPEE---------EE

K----------------------------------------------LQEILIHACPK--------------

-------------------------------------------------SSNNLGNW---------------

-------K-TVLDHNNESELHQRQD----------------------------------------NI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------SV-FFPSFTENDES-----SQNHH--SV-----NFEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEIETNERNLVHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNIILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTATQKTAEDKIKHLEEKLKEEEHHRKLFQD

KASELQTGLEINRILMSSVSNPKRSKE---KKKSSK--------------------------KTKCLKREPP

QQIYSKFESPPVAAE-------K-------------------------MVQHYG-P--HILQKPAEVIERRC

LYK----P-RT-TS-QC-KAVAPDSKKSISICDNLSELLVAMQDELDQMSIEHQE---LLNQMKEAESHSVC

EDLECELEHLVKKMKIKEEQISKLLKHQDSVR--KLQQKVQNPKM-SEASGIQREDNNPKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_042531801.1/1-474 centrosomal protein CEP57L1 isoform X1 [Dipodomys spectabilis]XP\_042531890.1 centrosomal protein CEP57L1 isoform X1 [Dipodomys spectabilis]

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-----------------------------------------------MDSELVHSVV----GSYLKPP----

-E-------RV-FAPPFTQNESS------QSCY--PL-----NLEVISPKMLQSPN-------SQ-------

-------ALILALKSLQEKIRRLELERTQAEDNLNILSREAAEYKKALENETNKRNLAHQELIKQKKDISIQ

LSAAQSRCTLLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQKEKEQDQMKLHAKLEKLNVLEKECIRLTTTQKTAEDKIKYLEEKLREEEHHRKLFQD

KASKLQTGLEISKILMSSVSNSKLSRE---KKKSSK--------------------------KT--LKRSPS

QQMYSKLRAPPFVPE-------K------SASAG-YSVNAGI-QTLLQMMYHHG-P--HH-QKPVQVIEPRR

LHK----PART-AS-QG-KTVPCDSGKSISVCDNLSEILMAMEDELDQMNMEREE---LLKQMKESQSHSVC

DDIECELEHLIKKMEIKGEQISKLKKHQDSVQ--KLQQKVQNSKI-NEASGIHREESNPKGTKNIKNS--SR

KCLNETNPFQK-NSSSHPVQ-VHNVQVKLRRDDIMWEQ

>XP\_012877800.1/1-474 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Dipodomys ordii]XP\_012877801.1 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Dipodomys ordii]XP\_012877802.1 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Dipodomys ordii]

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-----------------------------------------------MDSELVHSVV----GSYLKPP----

-E-------RV-FAPPFTQNESS------QSCY--PL-----NLEVISPKMLQSPN-------SQ-------

-------ALILALKSLQEKIRRLELERTQAEDNLNILSREAAEYKKALENETNKRNLAHQELIKQKKDISIQ

LSAAQSRCTLLEKQLEYTKRMVLNVEREKTVILEQQ------------------------------------

-----------AQLQKEKEQDQMKLHAKLEKLNVLEKECIRLTTTQKTAEDKIKYLEEKLREEEHHRKLFQD

KASKLQTGLEISKILMSSVSNSKLSKE---KKKSSK--------------------------KT--LKRGPS

QQMYAKLRAPPFVPE-------K------SASAG-YSVNAGI-QTLLQMMYHHG-P--HH-QKPIQVIEPRR

LHK----PART-AS-QG-KTVPCDSGKSISICDNLSEILMAMEDELDQMNMEREE---LLKQMKESQSHSVC

DDIECELEHLIKKMEIKGEQISKLKKHQDSVQ--KLQQKVQNSKI-NEASGIHREESNPKGTKNIKNS--SR

KCLNETNPFQK-NSSSHPVQ-VHNVQVKLRRDDIMWEQ

>XP\_048209683.1/1-474 centrosomal protein CEP57L1 [Perognathus longimembris pacificus]XP\_048209684.1 centrosomal protein CEP57L1 [Perognathus longimembris pacificus]XP\_048209685.1 centrosomal protein CEP57L1 [Perognathus longimembris pacificus]

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-----------------------------------------------MDSELIHSIV----GSYLKPP----

-E-------RV-FVPPCTQNEPS------QSCY--PV-----NLEVISPKMLQSPN-------SQ-------

-------ALILALKTLQEKIRRLELERTQAEDNLNILSKEAAEYKKALENETNERNLAHQELIKQKKDISIQ

LSAAQSRCTLLEKQLEYTKRMVLNVEREKTVILEQQ------------------------------------

-----------AQLQKEKEQDQMKLHAKLEKLDVLEKECFKLTTTQKTAEDKIKYLEQKLREEEHHRKLFQD

KASKLQTGLEISKMLMSSVSNSKLPKE---KKKSSK--------------------------KT--LKRGPS

QQMYSKLRAPPFVPE-------K------STSAS-CSVNAGI-QTLLQMMHHHV-P--HH-QKPAQVAEPRR

LHK----PARA-TS-QG-KAAPRDSGKATSICDNLSELLMAMQDELDQMNVEREE---LLKQMRETESHSVC

DDIECELEHLVKKMEIKGEQISKLKKHQDSVQ--KLQQKVQNSKI-SEASGIHREDSSPKGTKNIKNS--SR

KSLNETNPFQK-NSSSHPVQ-VHNVRVKLRRDDITWEQ

>XP\_020030938.1/1-469 centrosomal protein CEP57L1 [Castor canadensis]

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-----------------------------------------------MDSELIHSVV----GSYLQPP----

-E-------QV-FAPSFIQNESS------QNCH--SV-----NLEVPSPKMLQSPN-------SQ-------

-------ALVLALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISMQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKYLEEKLKEEEHHRKLFQD

KA--------LSKILMSSVTNSKSSKE---KKKSSK--------------------------KSACLKKGPP

QQTYSKFRAPTFVSE-------K------SASAG-CSMNANM-QNLLQMMQQCG-L--HSLQKPVQVTERRC

LYK----PTRT-TF-QC-QAVPCDSEKSISICDNLSELLMAMQDELDQMSMEHEE---LLKQMKKTESHSVY

DDIECELGHLLKKMEIKGEQISKLKKHQDSVR--KLQQKVQDSKI-SEALGFQREDSNPKGSKNIKNN--SR

KCLNETNPFQK-NISFHPMQ-VHNLRVKLRRDDITWEQ

>XP\_047413851.1/1-480 centrosomal protein CEP57L1 isoform X1 [Sciurus carolinensis]

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---------------------------------------------------MGS------------------

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-------------------RVQ--------------------------------------------I-----

-----------------------------------------------MNSELIHSIV----GSYLKPP----

-E-------EV-FAPSFTQDES------SQNCH--TV-----NLEVTSPKMLHSPN-------NQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISLQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQLRLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHHRKLFQD

KASELQTGLEISKILMSSVSKSKLSKG---KKKSSK--------------------------KTKCFKRGPP

QQIYAKLRELPFEAE-------K------SAA---CPVNASM-HSLLKMMNHCS-Q--HSLQKP-EMTEPRC

LYR----PTRK-TS-QC-KAVSQDSEKSISICDNLSELLMAMQDELDHMSMEHEE---LLKQMKKTKSRSVC

DDIECELEHLVKKMEIKGEQISKLRKHQDNVR--KLQQKVQNSKM-SDTSGIQREDSNLKGSKNIKNS--PR

KCLNETNPFQK--NNFQPVQ-VRNLQMKLRRDDIMWEQ

>XP\_026245427.1/1-481 centrosomal protein CEP57L1 [Urocitellus parryii]

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-----------------------------------------------MDSELIPSVI----GSYIKPP----

-E-------RV-FVSSFTKNESELPPKMNQNCH--PL-----NLEVTSPKMFHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKGISLQ

LRSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQLKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLTEEEHQRKLFQD

KASELQTGLEISKILMSSVSKSKLSKE---KKKSSK--------------------------KTKSLKRGPT

QQIYSKLRELPFEAE-------K------SAA---SSANGSM-YSLLKMMHHCS-Q--CSLQKP-EVTEPRC

LYR----PTRK-TS-RY-KAVPQDSEKSISICDNLSELLMAMQDELDQMSMEHEE---LLKQMKETESHSVC

DDIECELERLVKKMEIKGEQISKLRKHQDNVY--KLQQKVQNSKMLSNTSVIQREDSNLKGSKNIKNS--PR

KCLNETNPFQK-NNNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_027784069.1/1-481 centrosomal protein CEP57L1 [Marmota flaviventris]

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-----------------------------------------------MDSELIPSVI----GSYIKPP----

-E-------RV-FVSSFTKNESELPPKMNQNCH--PL-----NLEVTSPKMFHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKGISLQ

LRSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQLKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLTEEEHQRKLFQD

KASELQTGLEISKILMSSVSKSKLSKE---KKKSSE--------------------------KTKSLKRGPT

QQIYSKLRELPFEAE-------K------SAA---SSANGSM-YSLLKMMHHCS-Q--CSLQKP-EVTEPRC

LYR----PTRK-TS-RY-KAVPQDSEKSISICDNLSELLMAMQDELDQMSMEHEE---LLKQMKETESHSVC

DDIECELEHLVKKMEIKGEQISKLRKHQDNVY--KLQQKVQNSKMLSNTSVIQREDSNLKGSKNIKNS--PR

KCLNETNPFQK-NNNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_013216163.1/1-483 centrosomal protein CEP57L1 isoform X1 [Ictidomys tridecemlineatus]XP\_040139118.1 centrosomal protein CEP57L1 isoform X1 [Ictidomys tridecemlineatus]XP\_040139119.1 centrosomal protein CEP57L1 isoform X1 [Ictidomys tridecemlineatus]KAG3290037.1 centrosomal protein 57 like 1, transcript variant X1 [Ictidomys tridecemlineatus]

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-----------------------------------------------MDSELIPSVI----GSYIKPP----

-E-------RV-FVSSFTKNESELPPKMNQNCHQSEL-----NLEVTSPKMFHSPN-------SQ-------

-------ALILALRTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKGISLQ

LRSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQLKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLTEEEHQRKLFQD

KASELQTGLEISKILMSSVSKSKLSKE---KKKSSK--------------------------KTKSLKRGPT

QQIYSKLRELPFEAE-------K------SAA---SSANGSM-YSLLKMMHHCS-Q--CGLQKP-EVTEPRC

LYR----PTRK-TS-RY-KAVPQDSEKSISICDNLSELLMAMQDELDQMSMEHEE---LLKQMKETESHSVC

DDIECELERLVKKMEIKGEQISKLRKHQDNVY--KLQQKIQNSKMLSNTSVIQREDSNLKGSKNIKNS--PR

KCLNETNPFQK-NNNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_058431096.1/1-483 centrosomal protein CEP57L1 isoform X11 [Marmota monax]XP\_058431098.1 centrosomal protein CEP57L1 isoform X11 [Marmota monax]

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---------------------M--------------------------------------------I-----

-----------------------------------------------MDSELIPSVI----GSYIKPP----

-E-------RV-FVSSFTKNESELPPKMNQNCH--PL-----NLEVTSPKMFHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKGISLQ

LRSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQLKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLTEEEHQRKLFQD

KASELQTGLEISKILMSSVSKSKLSKE---KKKYSK--------------------------KTKSLKRGPT

QQIYSKLRELPFEAE-------K------SAA---SSANGSM-YSLLKMMHHCS-Q--CSLQKP-EVTKPRC

LYR----PTRK-TS-RY-KAVPQDSEKSISICDNLSELLMAMQDELDQMSMEHEE---LLKQMKETESHSVC

DDIECELEHLVKKMEIKGEQISKLRKHQDNVY--KLQQKVQNSKMLSNTSVIQREDSNLKGSKNIKNS--PR

KCLNETNPFRK-NNNFHPVQ-VHNLQMKLRRDDIMWEQ

>VTJ71873.1/1-491 Hypothetical predicted protein [Marmota monax]

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---------------------------------------------------MLYLY----------------

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-------------------SLQ--------------------------------------------I-----

-----------------------------------------------MDSELIPSVI----GSYIKPP----

-E-------RV-FVSSFTKNESELPPKMNQNCH--PL-----NLEVTSPKMFHSPN-------SQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKGISLQ

LRSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQLKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLTEEEHQRKLFQD

KASELQTGLEISKILMSSVSKSKLSKE---KKKYSK--------------------------KTKSLKRGPT

QQIYSKLRELPFEAE-------K------SAA---SSANGSM-YSLLKMMHHCS-Q--CSLQKP-EVTKPRC

LYR----PTRK-TS-RY-KAVPQDSEKSISICDNLSELLMAMQDELDQMSMEHEE---LLKQMKETESHSVC

DDIECELEHLVKKMEIKGEQISKLRKHQDNVY--KLQQKVQNSKMLSNTSVIQREDSNLKGSKNIKNS--PR

KCLNETNPFRK-NNNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_045429148.1/1-451 centrosomal protein CEP57L1 isoform X2 [Pipistrellus kuhlii]

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-----------------------------------------------MDSELMHSIV----GSYRKPP----

-E-------RM-FAPSFTQNDEL-----SRNHL--SV-----NFEVTSPKKLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETNERNLVHQELIKQKKDISIQ

LSSAQARCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------TQLQREKEQDQMKLQAKLEKLDLLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEINRILMSSVSNPNLSKE---KKKSSK--------------------------PA--------

-------------------------------RAC-HSVNASV-QNLLQMVQHYG-P--QILQKPAEAAEPRC

LYK----PART-AS-QC-KAVPPDSRTSVSICDNLSELLMEMQEELDQMGVEHQE---LLNQMKETESHTVC

EDIECELEHLVKKMEIKREQISKLMKHQDSVR--KLQQKVQNSKM-REASYIQREDSNPKGLKNIKYS--PR

KCLVNHS-LQK-NSNFHPTQ-VHNLQMKLRRDDIMWEQ

>KAK1338132.1/1-449 hypothetical protein QTO34\_001242, partial [Eptesicus nilssonii]

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-----------------------------------------------MDSELMHSIV----GSYIKPP----

-E-------RM-FAPSFTQNDEL-----SRNHR--SV-----NFEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDETNERNLVHQELIKQKKDISIQ

LSSAQARCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------TQLQREKEQDQMKLQAKLEKLDLLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASE----------------------------------------------------------KTKCLKRGPP

QQMYSKFGSMPMVAE-------K------PARAC-HSVNASV-QNLLQMVQHYG-P--QILQKPAEVAEPRC

LYK----PTRT-TS-QC-KVVPPDSEKSVSICDNLSELLMAMQEELDQMGVEHQE---LLNQMKETESHAVC

EDIECELEHLVKKMEIKREQISKLMKHQDSVR--KLQQKVQNSKM-SEASCIQREDSNPKGLKNIKYS--PR

KCLLNHS-LQK-NSNFHPTQ-VHNLQMKLRRDDIMWEQ

>XP\_062042574.1/1-490 centrosomal protein CEP57L1 isoform X1 [Lepus europaeus]

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--------------------------------------------------------WD--------------

-------T-STSG------------------------------------------------QGFNLI-----

-----------------------------------------------MDSELMHSIV----GSYLRPP----

-E-------RG-FIPSFTQNESL------QNHY--PV-----NEEVTSSKVLQSPN-------SQ-------

-------ALILALRTLQEKIHRLELERTQAEDNLNILSREAAQYKKALQNETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------ALLQREKEQDQMKLHAKLEKLDVLEKECLRLTATQKTAEDKIKQLEEKLTEEEHHRKLFQD

KASELQTGLEISKILMSSVSNSKISKE---KKK-SK--------------------------TNKCLKRGPP

QPVYSKFEALPFETE-------R------SASAG-SSVNASA-QNLLQTARRSG-P--RILQKPSEVTEHRC

LCR----PTRK-AS-WC-RAVPSDSEKSDSFCDNLSELLMAMQDELDQMGVEHQE---LLKQMKDTASHSVY

GDIECELEHLVKKMEIKREQISKLKKHQDSVR--KLQQKVQNPKM-RTAPGIQREDSQPNGSKNRKNS--PR

KCLNETNSFQK-NNSFHPVR-VHNLKVKLRKDDIMWEQ

>XP\_010598689.1/1-444 centrosomal protein CEP57L1 isoform X3 [Loxodonta africana]XP\_023398774.1 centrosomal protein CEP57L1 isoform X3 [Loxodonta africana]

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-----------------------------------------------MQS----------------------

-----------------------------------PT-----GIR----ECLSSSNLEE---WRH-------

-------ALILALKTLQDKIHRLELERTQAEDNLNILSKEAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNAEREKNIILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNSKHSKG---KKKSSK--------------------------KTKCLKRGLP

QESYSKFGAPSFVPG-------K------FVRAS-HSVNASV-QNLLQMVQDCG-L--QTLQKHSKASEPRY

FHK----PSR--IL-QC-KAAPPHPENSVSVCDNLSELLMAMQDELDQMNMEHQE---LLNQMKETQSHSVC

EDIESELEHLVKKMEIKGEQISKLKKHQDSVH--KLQKKLQNSRM-SEASGIQREDSNSKGSKNVKNS--PR

KCSHESSPLQK-NSNFHPKR-VHNLQMKLSKDDIMWEQ

>XP\_042636872.1/1-476 centrosomal protein CEP57L1 [Orycteropus afer afer]

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-----------------------------------------------MDSELIDSIV----GSYLKPP----

-E-------RG-FVPSFSQHETS------QNCH--PV-----NVEVTSPKMFHSPN-------SQ-------

-------ALILALKTLQDKIHRLELERTQAEDNLNILSKEAAQYKKALENETNERNLAHQELIKQKKDISIQ

LTSAQSRCTLLEKQLEYTKRMVLNAEREKNIILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLEKLDILEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNLKHSKG---KKKSSK--------------------------KTKCLKRGLP

QQSYSTFGAPPFVPG-------K------SVSAR-HSVSASM-QNLLQMTQSCG-P--HTLEKHAKVTEPRC

FPK----PSR--TP-QC-RPAPPNSENSISICDNLSELLMAMQDELDQMSMEHQE---LLNQMKQTQSHSAC

EGIESELEHLVKKMEIKGEQISKLKKHQDSVH--KLQQKLQNSKM-SKASSIQREDSTLKGSKNIKNS--PR

KCSHETSPIQK-NSTFPPKR-VHNLQMKLRKDDIMWEQ

>XP\_023583400.1/1-479 centrosomal protein CEP57L1 isoform X1 [Trichechus manatus latirostris]XP\_023583401.1 centrosomal protein CEP57L1 isoform X1 [Trichechus manatus latirostris]

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-----------------------------------------------------------------MV-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFTPYETS------QNCH--PV-----NMEVTPPKMFYSPN-------NQ-------

------AALILALKTLQDKIHRLELERTQAEDNLNILSKEAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCALLEKQLEYTKRMVLNAEREKNIILEQQ------------------------------------

-----------AQLQREKEQDHLKLHAKLDKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISRILMSSVSNPKHSKG---KKKSSK--------------------------KTKCLQRGLP

QESYLKFGAPPFVPG-------K------LVSTS-HSGNASV-QNLLQMMRDCG-P--HTLQKHSKAPEPRC

LHK----PST--TP-QC-KAVPPDPEKSVSICDNLSELLMAMQDELDQMNMEHQE---LLNQMKETQSHSVC

EDIESELEHLVKKMGIKAEQISKLKKHQNSVR--ELQQKLQNSKM-SEASGIQQEDSNPKGSKNMKNS--PR

KCSHETSPLQK-NSNFHPKR-VRNLQMKLSKDDIMWEQ

>XP\_023398740.1/1-478 centrosomal protein CEP57L1 isoform X1 [Loxodonta africana]XP\_023398747.1 centrosomal protein CEP57L1 isoform X1 [Loxodonta africana]XP\_023398752.1 centrosomal protein CEP57L1 isoform X1 [Loxodonta africana]XP\_023398757.1 centrosomal protein CEP57L1 isoform X1 [Loxodonta africana]XP\_049752801.1 centrosomal protein CEP57L1 isoform X1 [Elephas maximus indicus]XP\_049752896.1 centrosomal protein CEP57L1 isoform X1 [Elephas maximus indicus]XP\_049752982.1 centrosomal protein CEP57L1 isoform X1 [Elephas maximus indicus]XP\_049753067.1 centrosomal protein CEP57L1 isoform X1 [Elephas maximus indicus]XP\_049753167.1 centrosomal protein CEP57L1 isoform X1 [Elephas maximus indicus]XP\_049753251.1 centrosomal protein CEP57L1 isoform X1 [Elephas maximus indicus]XP\_049753295.1 centrosomal protein CEP57L1 isoform X1 [Elephas maximus indicus]XP\_049753386.1 centrosomal protein CEP57L1 isoform X1 [Elephas maximus indicus]XP\_049753444.1 centrosomal protein CEP57L1 isoform X1 [Elephas maximus indicus]XP\_049753487.1 centrosomal protein CEP57L1 isoform X1 [Elephas maximus indicus]

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-----------------------------------------------------------------MV-----

-----------------------------------------------MDSELTHSIV----GSYLKPP----

-E-------RV-FVPSFTQYETS------QNCH--PV-----KVEVTPPEVFHSPN-------SQ-------

-------ALILALKTLQDKIHRLELERTQAEDNLNILSKEAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNAEREKNIILEQQ------------------------------------

-----------AQLQREKEQDHMKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNSKHSKG---KKKSSK--------------------------KTKCLKRGLP

QESYSKFGAPSFVPG-------K------FVRAS-HSVNASV-QNLLQMVQDCG-L--QTLQKHSKASEPRY

FHK----PSR--IL-QC-KAAPPHPENSVSVCDNLSELLMAMQDELDQMNMEHQE---LLNQMKETQSHSVC

EDIESELEHLVKKMEIKGEQISKLKKHQDSVH--KLQKKLQNSRM-SEASGIQREDSNSKGSKNVKNS--PR

KCSHESSPLQK-NSNFHPKR-VHNLQMKLSKDDIMWEQ

>XP\_006840005.1/1-459 PREDICTED: centrosomal protein CEP57L1 [Chrysochloris asiatica]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFSRYETS------QNYH--PV-----NVEVIPPKMFHSPN-------SQ-------

-------ALILALKTLQDKIHRLELERTQAEDNLNILSKEAAQYKKALENETNERNLAHEELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNAEREKNIILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLAKLDVLEKECFRLTATQKSAEDKIRYLEEKLKEEEHQRKLFQD

KASELQTGLEINRILVSSVSNPKHCKG---KKKSSK--------------------------KTKCLKRGLP

QQSYSRFGAPPFVSG-------K-------------------------RMQDCG-P--HTLQKHSKAVEPVC

LHE----PSR--VP-QC-RAVSSDSEKSIAICDNLSELLMAMQAELHQMNMEHQE---LLNQMKETHSYLVY

EDIEGELEHLVKKMEVKREQISKLKKHQDSVH--KLQQQLQNSKM-NEASGIQREDSNHKGSKNIKNI--PR

KCSHETSSLQK-NRNFHPKR-VHNLQMKLRKDDIMWEQ

>XP\_006157026.1/1-483 centrosomal protein CEP57L1 isoform X1 [Tupaia chinensis]

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-------------------MLSS-----------------------------------------FRV-----

-----------------------------------------------MDSELMHSIV----GSYIKPP----

-E-------RM-FVPSFTQKESS------QNQQ--PV-----DIEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAEYKKALENETNERNLAHEELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFKLTTTQKTAEDKIKYLEEKLKEEEHQRKLFQD

KASELQTGLEISKILMSSASNRKHSKE---KKKPLK--------------------------KTKCLKRGPS

QQIYSKFGALPFVAE-------K------SASVG-CSVNASM-QNLLQMMEQCS-P--HVLQKP-EAAEPRC

LYK----PMQT-TS-QC-KAVSPAPELSTSICDNLSELLIAMQDEMDQMSMEHQE---LLKQMKETESHSVC

DDIECELERLVKKMEIKAEQISKLRKHQDSVR--KLQQKVQNSKM-SETSGIQREDNNPKGSKNIKNI--PR

KCLNETNPLQK-NSNFHPIR-VHNLQVKLRRDDIMWEQ

>XP\_006157035.1/1-457 centrosomal protein CEP57L1 isoform X5 [Tupaia chinensis]

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-------------------MLSS-----------------------------------------FRV-----

-----------------------------------------------MDSELMHSIV----GSYIKPP----

-E-------RM-FVPSFTQKESS------QNQQ--PV-----DIEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAEYKKALENETNERNLAHEELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFKLTTTQKTAEDKIKYLEEKLKEEEHQRKLFQD

KASELQTGLEISKILMSSASNRKHSKE---KKKPLK--------------------------S---------

------------------------------ASVG-CSVNASM-QNLLQMMEQCS-P--HVLQKP-EAAEPRC

LYK----PMQT-TS-QC-KAVSPAPELSTSICDNLSELLIAMQDEMDQMSMEHQE---LLKQMKETESHSVC

DDIECELERLVKKMEIKAEQISKLRKHQDSVR--KLQQKVQNSKM-SETSGIQREDNNPKGSKNIKNI--PR

KCLNETNPLQK-NSNFHPIR-VHNLQVKLRRDDIMWEQ

>XP\_006157032.1/1-457 centrosomal protein CEP57L1 isoform X4 [Tupaia chinensis]XP\_006157033.1 centrosomal protein CEP57L1 isoform X4 [Tupaia chinensis]

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-------------------MTTT-----------------------------------------IRY-----

-------------------------------------------------SELC-------------------

----------L-LFPT---------------KE--GF-----DF---------APNFATYVIFLQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAEYKKALENETNERNLAHEELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFKLTTTQKTAEDKIKYLEEKLKEEEHQRKLFQD

KASELQTGLEISKILMSSASNRKHSKE---KKKPLK--------------------------KTKCLKRGPS

QQIYSKFGALPFVAE-------K------SASVG-CSVNASM-QNLLQMMEQCS-P--HVLQKP-EAAEPRC

LYK----PMQT-TS-QC-KAVSPAPELSTSICDNLSELLIAMQDEMDQMSMEHQE---LLKQMKETESHSVC

DDIECELERLVKKMEIKAEQISKLRKHQDSVR--KLQQKVQNSKM-SETSGIQREDNNPKGSKNIKNI--PR

KCLNETNPLQK-NSNFHPIR-VHNLQVKLRRDDIMWEQ

>EHB04194.1/1-459 Cep57-related protein [Heterocephalus glaber]

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-----------------------------------------------MDSELMHSIV----GSYFKPP----

-E-------RV-FVPPFIQDETS------QKCH--PV-----NLEVTAPKMLHSPN-------SQ-------

-------ALTWALQTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLQEEEHQRKLFQD

KAAELQTGLEISKILMSSVSNSKHSKE---KKKSSK--------------------------KTKCLRKEPP

PQIYSKFRAPLF-------------------------------EAKKHKMYHCS-P--HVFPKHAHVIEPRC

LCK----PPRT-VS-QY-NAVPCESEKSVSICDNLSELLMAMQDELDQMSMEHEE---LLKQMKETESHSMC

DDIECELECLVKKMEIKEKQISKLKKHQDSVH--KLQQKVQNSKK-SKALGIQQDSN--QGLKSMKNS--PR

KCLNEANSSQK-SSNFHPIR-VHNIQAKLRRDDIMWEQ

>XP\_021107187.1/1-475 centrosomal protein CEP57L1 isoform X4 [Heterocephalus glaber]

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-----------------------------------------------MDSELMHSIV----GSYFKPP----

-E-------RV-FVPPFIQDETS------QKCH--PV-----NLEVTAPKMLHSPN-------SQ-------

-------ALTWALQTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLQEEEHQRKLFQD

KAAELQTGLEISKILMSSVSNSKHSKE---KKKSSK--------------------------KTKCLRKEPP

PQIYSKFRAPLFEAK-------K------SASAG-CSVNAGR-QSLQHKMYHCS-P--HVFPKHAHVIEPRC

LCK----PPRT-VS-QY-NAVPCESEKSVSICDNLSELLMAMQDELDQMSMEHEE---LLKQMKETESHSMC

DDIECELECLVKKMEIKEKQISKLKKHQDSVH--KLQQKVQNSKK-SKALGIQQDSN--QGLKSMKNS--PR

KCLNEANSSQK-SSNFHPIR-VHNIQAKLRRDDIMWEQ

>XP\_005377911.1/1-475 PREDICTED: centrosomal protein CEP57L1 isoform X4 [Chinchilla lanigera]XP\_005377912.1 PREDICTED: centrosomal protein CEP57L1 isoform X4 [Chinchilla lanigera]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RL-FVPPFMQDESS------QNCH--PM-----NLKVAPAKVLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMRLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KAAELQTGLEISKILMSSVSNSKRSKE---KKKSSK--------------------------KTKCLKRGPP

LQIYSKFRAPLFEAK-------K------SASAG-CSVNAGR-QNLQQTTHHCG-P--QILPKRAQVIEPRC

LCK----PPRA-IS-QY-KAVPRESEKSISICDSLSELLMAMQDELDQMSMEHAE---LLKQMKETETHSMC

DDVECELERLVKKMEIKGKQISRLKKHQDSVY--KLQQKVQNSKA-SKASGIQQDGN--QELKNMKNS--PR

KCLNEANSSQK-SSNFHPMQ-VHNIRMKLRRDDIMWEQ

>XP\_023578060.1/1-477 centrosomal protein CEP57L1 isoform X1 [Octodon degus]XP\_023578061.1 centrosomal protein CEP57L1 isoform X1 [Octodon degus]XP\_023578062.1 centrosomal protein CEP57L1 isoform X1 [Octodon degus]XP\_023578063.1 centrosomal protein CEP57L1 isoform X1 [Octodon degus]

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-----------------------------------------------MDSELMHNIV----GSYLKPP----

-E-------RM-FVPPLIEDESS------QNCH--PV-----NLQVTAAKMIHSPN-------SQ-------

-------ALILALKTLQEKIHRLEIERTQAEDNLNMLSREAAQYKKALENETNERNLAHQELVKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KAAELQTGLEISKILMSSVSNSKHYKE---KKKSSK--------------------------KTKCLKRGPP

LQIYSELRAPLIEAK-------K------SASAG-CSVNASW-QDLQQKMPRCG-P--RNLPKCAQVVEPRC

LCK----PPRA-VS-QYCKAVPRGSEKSISICDSLSELLMAMQEELDQMSMEHEE---LLKQMKETETHSVC

DDIEYELERLVKKMEIKGKQISRLKKHQDSVY--KLQQKVHNSKA-SKASGIQQDGN--QELKNMKNS--PR

KCLHEANSSQK-SNNFHPIQ-VHNIQMKLRRDDIMWEQ

>XP\_003466085.2/1-475 centrosomal protein CEP57L1 isoform X1 [Cavia porcellus]XP\_013003970.1 centrosomal protein CEP57L1 isoform X1 [Cavia porcellus]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPPFIRDESS------QHCH--PV-----NLEVTAAKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNTLSREAAQYKKALEDETNERNVAHRELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKSMILEQQ------------------------------------

-----------AQLQKEKEQDQMKLHAKLEKLDILEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KAAELQTGLEISKILMSSVSNSKHYKE---KKKSSK--------------------------KTTCLKRGPP

LQIYSNFRAPPFEAT-------K------SASMA-CSVNADR-QHLQQKTHRCG-S--HILPKRAQEIEPRC

LCK----PPRT-VS-QY-KAVPCESENSISICDSLSELLMAMQDELDQMSMEHEE---LLKQMKETETHSVC

DDIECELERLVEKMEIKGKQISKLKKHQDKVY--KLQQKVQNLKA-YKASVIQQAAN--QDLKIMKNS--PR

KCLTKANCSQK-SSNFHPVQ-VHNIQMKLRRDDIMWEQ

>XP\_019064749.1/1-544 centrosomal protein CEP57L1 isoform X1 [Fukomys damarensis]

-------------------------------------------------------MHVKNKGNNSGSHRQNR

GH------------------LLDS-----------------------ISRCARSLFNS--------------

--------------------------------------------------SK-------ETVFESS---SE-

------GR-KDHGSKGRSRETGYEAK-----------------------------------VI-IQI-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------TM-FVPPFIQDESS------QKCH--AV-----NLEVTAPKMRHSPN-------SQ-------

-------ALILALKTLQDKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLQEEEHQRKLFQD

KAAELQTGLEISKILMSSVSNSKHSKE---KKKSSK--------------------------KSKCLKKGPP

LQIYSKFRAPLFEAK-------K------SASAG-CSVNAGR-QSLQHKTYHCS-P--HGFPKGTQVIEPRC

LCK----PPRT-IS-QY-KAVPRESEKSISICDNLSELLMAMQDELDQMSMEHEE---LLKQMKETESHSIC

DNIEYELERLVKKMEIKEKQISKLKTHQDNVH--KLQQKVQNSKT-SKASGIQQDSN--QSLKSMKNS--PR

KCLNKANSSQK-SSNFHPIQ-VHNIQVKLRRDDITWEQ

>XP\_037677172.1/1-434 centrosomal protein CEP57L1-like [Choloepus didactylus]

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-----------------------------------------------MDFELMNSVV----GSYLKPP----

-E-------RM-FVPSVTQYESS------QNCH--PV-----NLEVTSPKMPHSPN-------SQ-------

-------AHFLALKTLQDKIHRLELERTQSEDNLNILSREASQYKKALENETNERNLAHQELIKQKKDISIQ

LNSAQSRCILLEKQLEYTNRMVLNAEREKNMVLEQQ------------------------------------

-----------AQLQREKEQDHMMLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSISKPKYSKE---MKKSSK------------------------------------

------------------------------------------------IMQHCD-Q--RALPKRSEVTEPRC

RCR----PSRR-PS-QC-KAVTPDSEMSISICDNLSEVLMAMQDELDQMNMEHQE---ILNQMKETESHSVC

EDIECELEHLAKKMEIKEEQISKLKKHQDSVC--KLQHKVKNLKM-NEASGIRQEDSNPKRSKNIKNS--PR

KCLHDTNPPQK-NSSLPPKQ-VHNLLMKLRKDYILWEQ

>XP\_037698225.1/1-453 centrosomal protein CEP57L1 isoform X4 [Choloepus didactylus]

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-----------------------------------------------MDFELMNSVV----GSYLKPP----

-E-------RM-FVPSVTQYESS------QNCH--PV-----NLEVTSPKMPHSPN-------SQ-------

-------ALFLALKTLQDKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LNSAQSRCILLEKQLEYTKRMVLNAEREKNMVLEQQ------------------------------------

-----------AQLQREKEQDHMMLHAKLEKLDILEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSISKPKYSKE---MKKSSK--------------------------L---------

------------------------------ASAS-HSVNANM-QNFLQIMQHCD-Q--RALPKRSEVTEPRC

RCR----PSRR-PS-QC-KAVTPDSEMSISICDNLSELLMAMQDELDQMNMEHQE---ILNQMKETESHSVC

EDIECELEHLVKKMEIKEEQISKLKKHQDSVC--KLQHKVKNLKM-NEASGIRQEDSNPKRSKNIKNS--PR

KCLHDTNPPQK-NSSLPPKQ-VHNLLMKLRKDDILWEQ

>XP\_037698217.1/1-479 centrosomal protein CEP57L1 isoform X1 [Choloepus didactylus]XP\_037698218.1 centrosomal protein CEP57L1 isoform X1 [Choloepus didactylus]XP\_037698219.1 centrosomal protein CEP57L1 isoform X1 [Choloepus didactylus]XP\_037698220.1 centrosomal protein CEP57L1 isoform X1 [Choloepus didactylus]XP\_037698221.1 centrosomal protein CEP57L1 isoform X1 [Choloepus didactylus]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDFELMNSVV----GSYLKPP----

-E-------RM-FVPSVTQYESS------QNCH--PV-----NLEVTSPKMPHSPN-------SQ-------

-------ALFLALKTLQDKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LNSAQSRCILLEKQLEYTKRMVLNAEREKNMVLEQQ------------------------------------

-----------AQLQREKEQDHMMLHAKLEKLDILEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSISKPKYSKE---MKKSSK--------------------------KTKCLKRGPP

QQIYSKFGALPFVAG-------K------LASAS-HSVNANM-QNFLQIMQHCD-Q--RALPKRSEVTEPRC

RCR----PSRR-PS-QC-KAVTPDSEMSISICDNLSELLMAMQDELDQMNMEHQE---ILNQMKETESHSVC

EDIECELEHLVKKMEIKEEQISKLKKHQDSVC--KLQHKVKNLKM-NEASGIRQEDSNPKRSKNIKNS--PR

KCLHDTNPPQK-NSSLPPKQ-VHNLLMKLRKDDILWEQ

>XP\_004468459.2/1-480 centrosomal protein CEP57L1 isoform X1 [Dasypus novemcinctus]

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-----------------------------------------------------------------MV-----

-----------------------------------------------MDFELMNSIV----GSYHKPP----

-E-------RM-FVSSVTQYESS------QNCH--PV-----NSEVTSPKMPHSPN-------SQ-------

-------ALFLALKTLQDKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNAEREKNMVLEQQ------------------------------------

-----------AQLQREKEQDHMMLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGIEINRILMSSVSKPKYSKE---MKKSSK--------------------------KTKCLKRGLP

LQIYSKFGVLPFVAG-------K------SASAS-HSVNANM-QNFLQMTQHCD-Q--RILQKNSEVTEPRC

LFR----PSRRGPS-QC-KAVPPDSEKSISVCDNLSELLMAMQDELEQMSMEHQE---ILNQMKETESRSIC

EDIECELERLVKKMEIKEEQISKLKKHQDSVR--KLQDKVQNLRM-NEASDIQREDSSPKRAKNIKNS--PR

KCLNQTNPPQK-NSNLHPKQ-VHNLVMKLRKDDIMWEQ

>XP\_045010403.1/1-478 centrosomal protein CEP57L1 isoform X1 [Jaculus jaculus]XP\_045010404.1 centrosomal protein CEP57L1 isoform X1 [Jaculus jaculus]XP\_045010405.1 centrosomal protein CEP57L1 isoform X1 [Jaculus jaculus]

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-----------------------------------------------MDSEFIHSIV----GSYLKPP----

-E-------RV-FVPSLTQNESP------QYHH--PV-----NFQATAPKMVNSPN-------SQ-------

-------ALVLALRTLQEKIHRLELERTQAEDNLSILSREAAQYKKALENETNERNLAHQELIKQKKDISMQ

LSSAQSRCTILEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQQTAEEKIKYLEEKLKEEEHQRKLFQD

KASELQTGLEISKILMSSVSNSKHSKE---KKKSSK--------------------------KSKCIKGRPP

QQIESKLSTPSFKCE-------K------LNSSD-CSVSASL-QNLLQLMPRCG-P--QSFPKPALALEPRC

LHK----PPRT-AS-GC-RTASCSSEKPIVIFDNLSELLMAMQDELNQMSLEHNK---LLTQREQTESRAVC

DDIEWELEQLVKRMEIKGEQISKLKKHQNSVR--KLQQKFQNSWK-SEPSSTLQDDTNPKGSKCMKNS--PR

KYLSETNPFPK-RSNFHPIQ-VHNLQMKLRRDDIMWEQ

>XP\_008518740.1/1-453 PREDICTED: centrosomal protein CEP57L1 isoform X2 [Equus przewalskii]XP\_008518748.1 PREDICTED: centrosomal protein CEP57L1 isoform X2 [Equus przewalskii]XP\_008518756.1 PREDICTED: centrosomal protein CEP57L1 isoform X2 [Equus przewalskii]XP\_008518760.1 PREDICTED: centrosomal protein CEP57L1 isoform X3 [Equus przewalskii]XP\_014589949.2 centrosomal protein CEP57L1 isoform X2 [Equus caballus]XP\_014589955.2 centrosomal protein CEP57L1 isoform X3 [Equus caballus]XP\_023506657.1 centrosomal protein CEP57L1 isoform X2 [Equus caballus]

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-----------------------------------------------MDPELMHSIV----GSYLKPP----

-E-------RV-LVPSFTQNDQS-----APTHH--SV-----SLEVNLPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLDLERTQAEDNLNVLSREAAQYKKALENETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHLKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHHRKLFQD

KASELQTGLEINRILMSSVSNPKRSKE---KKKSS-------------------------------------

----------------------K------SASAS-HSVKASR-QNLLQTMQHYG-P--HILPKRAEVTEPRR

LYK----PTRS-TS-QR-KAVPPDSGKSICICNNVSELLMAMQDELDQMSMKHQE---LLNQIKETESHSVF

ENAECELEHLVKKMEIKVEQISKLKKHQDNVR--KLQQKVQNSKM-SEASGIRQEDNYPNGSNNLKNS--PR

KCLLNNP-LQK-SSNFHPIR-VRNLQMKLRRDDIMWEQ

>XP\_014694517.2/1-453 centrosomal protein CEP57L1 isoform X1 [Equus asinus]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDPELMHSIV----GSYLKTP----

-E-------RV-LVPSFTQNDQS-----APTHH--SV-----SLEVNLPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLDLERTQAEDNLNVLSREAAQYKKALENETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHLKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKYLEEKLKEEEHHRKLFQD

KASELQTGLEINRILMSSVSNPKRSKE---KKKSS-------------------------------------

----------------------K------SASAS-HSVKASR-QNLLQTMQHYG-P--HILPKRAEVTEPRR

LYK----PTRS-TS-QR-KAVPPDSGKSICICNNVSELLMAMQDELDQMSMKHQE---LLNQIKETESHSVF

ENAECELEHLVKKMEIKVEQISKLKKHQDNVR--KLQQKVQNSKM-SEASGIQQEDNYPNGSNNLKNS--PR

KCLLNNP-LQK-SSNFHPIR-VRNLQMKLRRDDIMWEQ

>XP\_008518731.1/1-461 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Equus przewalskii]XP\_023506656.1 centrosomal protein CEP57L1 isoform X1 [Equus caballus]

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------------GA-------------------------------------------------QRQI-----

-----------------------------------------------MDPELMHSIV----GSYLKPP----

-E-------RV-LVPSFTQNDQS-----APTHH--SV-----SLEVNLPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLDLERTQAEDNLNVLSREAAQYKKALENETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHLKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHHRKLFQD

KASELQTGLEINRILMSSVSNPKRSKE---KKKSS-------------------------------------

----------------------K------SASAS-HSVKASR-QNLLQTMQHYG-P--HILPKRAEVTEPRR

LYK----PTRS-TS-QR-KAVPPDSGKSICICNNVSELLMAMQDELDQMSMKHQE---LLNQIKETESHSVF

ENAECELEHLVKKMEIKVEQISKLKKHQDNVR--KLQQKVQNSKM-SEASGIRQEDNYPNGSNNLKNS--PR

KCLLNNP-LQK-SSNFHPIR-VRNLQMKLRRDDIMWEQ

>XP\_046532784.1/1-473 centrosomal protein CEP57L1 isoform X1 [Equus quagga]XP\_046532785.1 centrosomal protein CEP57L1 isoform X2 [Equus quagga]XP\_046532786.1 centrosomal protein CEP57L1 isoform X1 [Equus quagga]XP\_046532787.1 centrosomal protein CEP57L1 isoform X1 [Equus quagga]XP\_046532788.1 centrosomal protein CEP57L1 isoform X1 [Equus quagga]XP\_046532789.1 centrosomal protein CEP57L1 isoform X1 [Equus quagga]XP\_046532790.1 centrosomal protein CEP57L1 isoform X1 [Equus quagga]XP\_046532791.1 centrosomal protein CEP57L1 isoform X1 [Equus quagga]XP\_046532792.1 centrosomal protein CEP57L1 isoform X2 [Equus quagga]

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-----------------------------------------------------------------MI-----

-----------------------------------------------MDPELMHSIV----GSYLKTP----

-E-------RV-PVPSFTQNDQS-----APTHH--SV-----SLEVNLPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLDLERTQAEDNLNVLSREAAQYKKALENETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQRSF---GGKLTPQKYQ--------------------

----VFQSMNMAQLQREKEQDHLKLQAKLEKLDVIEKECFKLTTTQKTAEDKIKYLEEKLKEEEHHRKLFQD

KASELQTGLEINRILMSSVSNPKRSKE---KKKSS-------------------------------------

----------------------K------SASAS-HSVKASR-QNLLQTMQHYG-P--HILPKRAEVTEPRR

LYK----PTRS-TS-QR-KAVPPDSGKSICICNNVSELLMAMQDELDQMSMKHQE---LLNQIKETESHSVF

ENAECELEHLVKKMEIKVEQISKLKKHQDNVR--KLQQKVQNSKM-SEASGIQQEDNYPNGSNNLKNS--PR

KCLLNNP-LQK-SSNFHPIR-VRNLQMKLRRDDIMWEQ

>KAI5929711.1/1-451 Centrosomal protein CEP57L1 [Manis javanica]

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----------------------------------------------------------------MFV-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-VVPSFTESDES-----AQTHR--PV-----NLEVTSPKTLHSPN-------SQ-------

-------ALILALKALQEKIHRLELERTQAEDNLTILSREAAQYKKALDSETNERNLAQQELMKQKKDVSTQ

LSAAQAHCALLEKQLACAKRMVLNAEREKSMILEQQ------------------------------------

-----------AQLQREKEKDRLKLQAKLEKLSVLEKECFKLTATQKTAEDRIKHLEGKLQEEEHHRELFRD

RAAELQTGLEINRILMSSVSNPKRSKD----KKAS-------------------------------------

----------------------K------SARAS-HSVNVSV-QSLLQTMQHCG-P--RGLQGPAVAAGPRC

PRR----PTRA-AS-QG-AAVP-DAEKSISMCDCLSELLIAMHDELDQMGLKHQE---LLNQMEETESGSVC

EDIECELERLVKKMEVKGEQISKLMRHQDNVR--KLQQKIQDSKM-SEASGIQQEDSNSKGSKNMKNS--PR

KCLLTDS-LQK--NNFHPFR-VRNLQMKLRRDDILWEQ

>XP\_036758816.2/1-470 centrosomal protein CEP57L1 isoform X1 [Manis pentadactyla]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FVPSFTESDES-----AQTHR--PV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKALQEKIHRLELERTQAEDNLTVLSREAAQYKKALDSETNERNLAQQKLMKQKKDISAQ

LSSAQSRCALLEKQLACAKRMVLNAEREKRMILEQQ------------------------------------

-----------AQRQREKEKDRLKLQAKLEKLNVLEKECFKLTTTQKTAEDKIKHLEGKLQEEEHHRKLFRD

RAAELQTGLEINRILMSSVSNPKRSKD----KKASK--------------------------KSKCLNKGPP

QQIQSRFGSLPLVTE-------K------SARAI-HSMNVSV-----QTMQHCG-P--RGLQGPAQAAEPRC

PRR----PTRA-AS-QG-AAVP-DAEKSISMCDCLSELLIAMQDELDQMGLEHQE---LLNQMEETESGSVC

EDIECELQHLVKKMEIKGEQISKLMRHQDNVR--KLQQKIQNSKM-SEASGIQQEDSNYKGSKNIKKS--PR

KCLLTNS-LQK--NNFHPLR-VCNLQMKLRRDDIMWEQ

>XP\_036868133.1/1-477 centrosomal protein CEP57L1 isoform X1 [Manis javanica]

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----------------------------------------------------------------MFV-----

-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-VVPSFTESDES-----AQTHR--PV-----NLEVTSPKTLHSPN-------SQ-------

-------ALILALKALQEKIHRLELERTQAEDNLTILSREAAQYKKALDSETNERNLAQQELMKQKKDVSAQ

LSAAQAHCALLEKQLACAKRMVLNAEREKSMILEQQ------------------------------------

-----------AQLQREKEKDRLKLQAKLEKLSVLEKECFKLTTTQKTAEDRIKHLEGKLQEEEHHRELFRD

RAAELQTGLEINRILMSSLSNPKRSKD----KKASK--------------------------KSKCLNKGLP

QRIQSRFGLLPLETG-------K------SARAS-HSVNVSV-QSLLQTMQHCG-P--RGLQGPAEAAEPRC

PRR----PTRA-AS-QG-AAVP-DAEKSISMCDCLSELLIAMHDELDQMGLKHQE---LLNQMEETESGSVC

EDIECELERLVKKMEVKGEQISKLMRHQDNVR--KLQQKIQDSKM-SEASGIQQEDSNSKGSKNMKNS--PR

KCLLTDS-LQK--NNFHPFR-VRNLQMKLRRDDILWEQ

>XP\_030879748.1/1-441 centrosomal protein CEP57L1 [Leptonychotes weddellii]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-FIPSFTQNDES-----SQTHH--SA-----NLEATSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

--------------------------------------------------DKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHCKEK--KKKSLK--------------------------KTRCLKGGPP

QQIHSEFGSLPVVAE-------K------SSSAN-YPVNASM-QSLLQLMQHYG-P--HNCQKLTEVTEPRC

LCK----PTRT-TS-QG-KAEPSDSKNSISIGDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHLVC

EDIECELEHLVKKMEIKGEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQREESNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_059257159.1/1-424 centrosomal protein CEP57L1 isoform X7 [Mustela nigripes]

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-------SLILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERILAHQELIKQKKDITIQ

LNSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHSKE----KKSLK--------------------------KTKCLKGGPP

QQTYSKFGSLPIVAE-------K------SASAS-CSVNSSM-QSLLQLMQHYG-P--HTCQKLPEVTEPPC

LYK----PLRT-TS-QG-KAEPSDSKISISIGDSLSELLMAMQDELDQMSMEHEE---LLNQMKDTESHSVC

EDIECELEHLVKKMEIKEEQISKLLKHQANVR--KLQQKVQNSKM-SEASGIQREENNLKGSKPIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_045654391.1/1-444 centrosomal protein CEP57L1 isoform X4 [Ursus americanus]XP\_045654392.1 centrosomal protein CEP57L1 isoform X4 [Ursus americanus]XP\_045654394.1 centrosomal protein CEP57L1 isoform X4 [Ursus americanus]XP\_045654395.1 centrosomal protein CEP57L1 isoform X4 [Ursus americanus]

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----------------------------------------------------MQSPM----G----------

-----------------SRQYLS-----SN------------NLE----EWRH-------------------

-------ALILALKTLQEKIHRLELERTQAEDNLNVLSREAAQYKKALEKETNERNLAHQELVKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKRSKE---KKKSLK--------------------------KTKCLKGGPP

QQIYSKLGSPPITAE-------K------SSSAS-SSVNASM-QSLLQLMQHYR-P--HTCQKLTEVTEPRC

LYK----PTRT-TS-QG-KAEPSDSKNSISIGDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEYLVKKMEIKGEQISKLMKHQDNVR--KLQQKVQNSKM-NEASGIQREESNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_032263998.1/1-445 centrosomal protein CEP57L1 isoform X4 [Phoca vitulina]XP\_032263999.1 centrosomal protein CEP57L1 isoform X4 [Phoca vitulina]XP\_032264000.1 centrosomal protein CEP57L1 isoform X4 [Phoca vitulina]XP\_032264001.1 centrosomal protein CEP57L1 isoform X4 [Phoca vitulina]

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----------------------------------------------------MQSPM----GS---------

---------RQ-YLSS---NNPE-----GWRH----------------------------------------

-------ALILALKTLQEKIHRLELERTQAEDNLNSLSREAAQYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHCKEK--KKKSLK--------------------------KTRCLKGGPP

QQIHSKFGSLPAVAE-------K------SASAN-YPVDASM-QSLLQLMQHYG-P--HNCQKLTEVTEPRC

LYK----PTRT-TS-QG-KAEPSDSKNSISIGDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHSVC

EDIECELEHLVKKMEIKGEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQREDSNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_054361463.1/1-445 centrosomal protein CEP57L1 isoform X4 [Mirounga angustirostris]XP\_054361464.1 centrosomal protein CEP57L1 isoform X4 [Mirounga angustirostris]XP\_054361465.1 centrosomal protein CEP57L1 isoform X4 [Mirounga angustirostris]XP\_054361466.1 centrosomal protein CEP57L1 isoform X4 [Mirounga angustirostris]

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----------------------------------------------------MQSPM----GS---------

---------RQ-YLSS---NNPE-----GWRH----------------------------------------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEKETNERNLAHQELIKQKKDITIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHRKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEINRILMSSVSNPKHCKEK--KKKSLK--------------------------KTRCLKGGPP

QQIHSEFGSLPVVAE-------K------SASAN-YPVNASM-QSVLQLMQHYG-P--HNCQKLTEVTEPRC

LYK----PTRT-TS-QG-KAEPSDSKNSISIGDNLSELLMAMQDELDQMSMEHEE---LLNQMKETESHLVC

EDIECELEHLVKKMEIKGEQISKLLKHQDNVR--KLQQKVQNSKM-SEASGIQREESNLKGSKNIKNS--PR

KCLLTNS-LQK-NSNFHPVQ-VHNLQMKLRRDDIMWEQ

>XP\_013848199.1/1-429 centrosomal protein CEP57L1 isoform X5 [Sus scrofa]

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-----------------------------------------------MDSVSL-------------------

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-------SLILALKTLQEKIYRLELERTQAEDNLNILSREAAQYKKALENETSERNLAHEELIKQKKDISMQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKDMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLAINRILMASASNPKCSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPVVAE-------K------SASAS-HSVNAST-QNLLQTMQHYG-P--HILQKPAKVIEPRY

LYK----PSRT-TS-QC-KAVPSDSEKSISICDNLSELLMAMQDELDQMSIEYQE---LLSQMKETESQSVC

EDIECELEHLVKKMEIKGERISKLMKHQDSVR--KLQQKVQSSKM-SEASAIQQEDSNLKGSKNIKNS--PR

KCLLTNS-LQK-NSSFHPIR-VHNLQMKLRRDDILWEQ

>XP\_058163233.1/1-429 centrosomal protein CEP57L1 isoform X5 [Dasypus novemcinctus]

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------------------MWEA--------------------------------------------------

-------ALFLALKTLQDKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNAEREKNMVLEQQ------------------------------------

-----------AQLQREKEQDHMMLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGIEINRILMSSVSKPKYSKE---MKKSSK--------------------------KTKCLKRGLP

LQIYSKFGVLPFVAG-------K------SASAS-HSVNANM-QNFLQMTQHCD-Q--RILQKNSEVTEPRC

LFR----PSRRGPS-QC-KAVPPDSEKSISVCDNLSELLMAMQDELEQMSMEHQE---ILNQMKETESRSIC

EDIECELERLVKKMEIKEEQISKLKKHQDSVR--KLQDKVQNLRM-NEASDIQREDSSPKRAKNIKNS--PR

KCLNQTNPPQK-NSNLHPKQ-VHNLVMKLRKDDIMWEQ

>XP\_055246717.1/1-440 centrosomal protein CEP57L1 isoform X4 [Gorilla gorilla gorilla]

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------------------------------------------------MNEWKNDIM---------------

-----------------PQNFQR------WDCL--VA-----KTSSGIPLIL-----------LY-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKQ---KKKSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K-------------------------MRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TF-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVC--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKNS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_014200928.1/1-457 centrosomal protein CEP57L1 isoform X3 [Pan paniscus]XP\_016811602.1 centrosomal protein CEP57L1 isoform X13 [Pan troglodytes]

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------------------------------------------------MNEWKNDIM---------------

-----------------PQNFQR------WDCL--VA-----KTSSGIPPIL-----------LY-------

-------ALILALKTLQEKIRRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCIKRRPP

WQICSKFGALPFVAE-------K------VRGDK-MKIVVQK-NSCFVMRQHRD-P--HILQKPFNVTETRC

LPK----PSRT-TS-WC-KAIPPDSEKSISICDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLLKKMEIKGEQISKLKKHQDSVC--KLQQKVQNSKM-SEASGIQQEDSYPKGSKNIKHS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_025237736.1/1-444 centrosomal protein CEP57L1 isoform X7 [Theropithecus gelada]

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-----------------------------------------------RDLEQGTSAS----GGSKLAPWGGF

RS-------RM-F-----------------GVC--PG-----EGE------------------GK-------

-------TLILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQIKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K-------------------------RRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPRDSEKSISIFDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHQDSVR--KLQQKVQNSKM-SEASGVQQEDSNPKGSKNIKNS--PR

KCLTDTKLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_055981414.1/1-485 centrosomal protein CEP57L1 isoform X1 [Sorex fumeus]

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---------------------------------------------------ME-------------------

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--------------------------------------------------------------LYGEI-----

-----------------------------------------------MDSELMNSIL----GSYLKPP----

-E-------RV-FVPSFTQNDES-----SQNHQ--SM-----NLEITSPRVLHSPN-------RQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNSLSREAAQYKKALENETNERNLAYQELIKQKKNISVQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AHLQREKEQDQLKLQAKLEKLDILEKECFKLTTTQKTAEDKIKYLEEKLTEEGHLRKLIQD

KAAELQTGLEVNRILMSSVSNPNCSKG---KRKSSK--------------------------KTKCLKRAPP

QQTYSTSGPQSFVSE-------K------YACANLHSVNAGV-QNLLQNSQHYR-PRTHSLPAPTAVNEAKH

FYK----STRT-AS-QC-TSAPSDSEKFTSICDNLSELLKAMQDELNQMSMEHQE---LWKQMKETKNPSVC

EDIGGKLEYLVKKMEIKGEQISKLMKHQKSVH--KLQQKVQNSMM-ITTSDTQQEDNNPKGSKNIKFN--PR

KCSLTNS-PQK-NS--HPVR-VQNLQMKLRRDDIMWEQ

>XP\_054992528.1/1-516 centrosomal protein CEP57L1 isoform X3 [Sorex araneus]

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---------------------------------------------------MEH------------------

---------------------------------------------------------PE---SLPKADYTQG

RH---QAR-PCHQ------AHKSRGRG---------------------------------IPVFLEI-----

-----------------------------------------------MDSELMNSML----GSYLKPP----

-E-------RV-FVPSFTQNDES-----SQNHQ--SV-----NLELTSPRVLHSPN-------QQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNSLSREAAQYKKALENETNERNLAYQELIKQKKNISVQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AHLQREKEQDQLKLQAKLEKLDILEKECFKLTTTQKTAEDKIKYLEEKLMEEGHLRKLIQD

KAAELQTGLEVNRILMSSVSNPNCSKG---KRKSSK--------------------------KTKCLKRAPP

QQTYSTFGPQSFVSE-------K------YACANLHSVNAGI-QNLPQNSQHYR-PCTHSLPIPIAVNDAKH

-DK----STRT-AS-QC-TSAPSDSEKFTSICDNLSELLKAMQDELNQMSMEHQE---LWKQMKETKSPSVC

EDIGGKLEYLVKKMEIKGEQISKLMKHQKNVH--KLQQKVQNSMM-IATSDIQQRDSNPKGSKNIKIS--PR

KCSLTNS-PQK-NS--HPVR-VQNLQMKLRRDDIMWEQ

>XP\_008850657.1/1-432 centrosomal protein CEP57L1 isoform X4 [Nannospalax galili]

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-----------------MLNTGI------DKLY--DI-----CT----------------------------

--------LVLALKTLQEKIHRLELERAQAEDNLNVLSREAAQYKKALESETNERNLAHQELIKQKKDISIQ

LSSIQSHCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQQTAEDKIKYLEEKLKEEEHQRKLFED

KACELQTGLEISKILMSSVSNSKYWKE----KKPSK--------------------------KTKYFKKGPP

QQMYSKFRAPSSESE-------K------LVSAG-CSVNANL-QNLLQMVHHCG-P--YSLQKPAEVTEARC

LYK----PLRG-TS-QC-KAIPRNSERPVSICDNLSELLVAMQDELDQMSLEHKE---LLQQMKQTGSHLVC

DDIDQELEQLVKKMEIKGEQISKLKKHQDSVR--KLQQKFQ-----NLSSGIHQEHSNPKGSKNIKNS--PR

RCLNETNPSQK-SSNFHPMQ-VHNLQVKLRRDDITWEQ

>XP\_017658502.1/1-477 centrosomal protein CEP57L1 isoform X1 [Nannospalax galili]

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--------------------------------------------------------------MTFVI-----

-----------------------------------------------MDSELSHSVV----GSYLKPP----

-Q-------RM-FIPSFTENEPF------QNCY--AV-----NSEVTSSKMFNSPN-------SQ-------

-------ALVLALKTLQEKIHRLELERAQAEDNLNVLSREAAQYKKALESETNERNLAHQELIKQKKDISIQ

LSSIQSHCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQQTAEDKIKYLEEKLKEEEHQRKLFED

KACELQTGLEISKILMSSVSNSKYWKE----KKPSK--------------------------KTKYFKKGPP

QQMYSKFRAPSSESE-------K------LVSAG-CSVNANL-QNLLQMVHHCG-P--YSLQKPAEVTEARC

LYK----PLRG-TS-QC-KAIPRNSERPVSICDNLSELLVAMQDELDQMSLEHKE---LLQQMKQTGSHLVC

DDIDQELEQLVKKMEIKGEQISKLKKHQDSVR--KLQQKFQ-----NLSSGIHQEHSNPKGSKNIKNS--PR

RCLNETNPSQK-SSNFHPMQ-VHNLQVKLRRDDITWEQ

>XP\_006881222.1/1-459 PREDICTED: centrosomal protein CEP57L1 [Elephantulus edwardii]

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-----------------------------------------------MDSELMHSVV----GSYLKPP----

-E-------KV-CVPSFTQHETA-----KNYCHV--------NVDISPPKALHGPN-------SQ-------

-------ALILALRTLQDKIRRLELERTQAEDNLNILTREAAEYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLERQLEYTKRMVLNAEREKTIILEQQ------------------------------------

-----------AQLQKEKEQDHMKLHAKLEKLDVLEKECFRLTATQKTAEDKIKLLEEKLKEEEHHRKLFQD

KACELQTGVEINRILMSSVSNLTHLRK---KKKYSK--------------------------KTKCLKSELP

QQSYSKFGAPSFMSG-------K-------------------------MMQNCD-L--HTFLKHAKATDPRC

LQKHSK------IP-QS-RAAPPDPEKFIPIYDNLSELLTAMQDELDQMNMEHQE---LLNQMKETQSPSVC

EDIGNELEHLVKKMEIKREQISKLKKHQDSVH--KLQQKLQNPKM-SEASAILQEDSNSKGSKNLKNS--PG

KRSHETSSLQK-TSHFHPKR-VHNLQMKLRKDDIMWEQ

>XP\_017734254.1/1-427 PREDICTED: centrosomal protein CEP57L1 [Rhinopithecus bieti]

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--------------------------------------------------------MP--------------

-------R-RRS----LSPVLE------------------------------------------SQI-----

-----------------------------------------------MDSELMHSIV----GSYHKPP----

-E-------RV-FVPSFTQNEPS------QNCH--PA-----NLEVTSPKILHSPN-------SQ-------

-------G------------------------NADI------------------------EFEECFIDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKQ---KKTSSK--------------------------KTKCIKRGPP

WQICSKFGALPFVAE-------K-------------------------RRQHRG-P--HILQKPFNVAETRC

LPR----PSRT-TS-WC-KAIPPDSEKSISISDNLSELLMAMQDELDQMSMEHQE---LLKQMKETESHSVC

DDIECELECLVKKMEIKGEQISKLKKHEESVR--KLQQKVQNSKM-SEASGIQQEDSNPKGSKNIKQS--PR

KCLTDTNLFQK-NSSFHPIR-VHNLQMKLRRDDIMWEQ

>XP\_005377908.1/1-564 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Chinchilla lanigera]

---------------------------------------------------------MRLRGTPSG------

---------------------------------------------------AGGVFHS--------------

--------------------------------------------------RTFWSRWPGEWIRKAS---S--

-------R-KTSTLRLLSHTQEQHIK-----------------------------------TTTIRL-----

-----------------------------------------------KKAESKFKITLKKCGSFFIMP----

-KPGLGSLGRV-KAAPLTSGKCSF----AAACA--AVCDRNYNPQEPPRRCLSQPA-------NQRFWRQEL

SELGGRSALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMRLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KAAELQTGLEISKILMSSVSNSKRSKE---KKKSSK--------------------------KTKCLKRGPP

LQIYSKFRAPLFEAK-------K------SASAG-CSVNAGR-QNLQQTTHHCG-P--QILPKRAQVIEPRC

LCK----PPRA-IS-QY-KAVPRESEKSISICDSLSELLMAMQDELDQMSMEHAE---LLKQMKETETHSMC

DDVECELERLVKKMEIKGKQISRLKKHQDSVY--KLQQKVQNSKA-SKASGIQQDGN--QELKNMKNS--PR

KCLNEANSSQK-SSNFHPMQ-VHNIRMKLRRDDIMWEQ

>Q8VDS7.1/1-400 RecName: Full=Centrosomal protein CEP57L1; AltName: Full=Centrosomal protein 57kDa-like protein 1; AltName: Full=Centrosomal protein of 57 kDa-related protein; Short=Cep57R; AltName: Full=Cep57-related protein [Mus musculus]AAH21375.1 RIKEN cDNA 2410017P07 gene [Mus musculus]

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-----------------------------------------------MDSELSQSMV----GSYLNPP----

-E-------RM-HLPSFTQNEAF------QNCH--PG-----TP----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRRLELERTQAEDNLNLLSREAAQYKKALEEETNERNLAHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLHVLEKECLRLTATRQTAEDKIKCLEEKLKEEEHQRRLFQD

RACE----------------------------------------------------------KTNCLKREPP

QQRDHKFRTPTFER----------------------------------------------------------

-KK----PFRT-TS-QA-RANPQSSGEPVSICDSLSELLMTMEEELDQMNMEHRE---LLRQTMQPGNHSVS

EDIEQELEQLAKKMESKGDQISKLKKHQDSVR--KLQEKIENSRI-NESSGIH---GNPKGSKNLKTS--PR

KCVSETSSFQR-DRGFQPVQ-VHSLQSKLRRDDIKWEQ

>XP\_036011351.1/1-481 centrosomal protein CEP57L1 isoform X1 [Mus musculus]

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---------------------------------------------------MS-------------------

---------------------------------------------------------SEIR-EKPS--CSAC

-----LCR-EFGCA--SHRADSDAEAGA-------------------------------GLQGSRDA-----

-------------------TPR------------------VEVQAETMDSELSQSMV----GSYLNPP----

-E-------RM-HLPSFTQNEAF------QNCH--PG-----TP----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRRLELERTQAEDNLNLLSREAAQYKKALEEETNERNLAHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLHVLEKECLRLTATRQTAEDKIKCLEEKLKEEEHQRRLFQD

RACELQTGFEISKILMSTVSNSKHCKE---KKKQPK--------------------------KTNCLKREPP

QQRDHKFRTPTFER----------------------------------------------------------

-KK----PFRT-TS-QA-RANPQSSGEPVSICDSLSELLMTMEEELDQMNMEHRE---LLRQMMQPGNHSVS

EDIEQELEQLAKKMESKGDQISKLKKHQDSVR--KLQEKIENSRI-NESSGIH---GNPKGSKNLKTS--PR

KCVSETSSFQR-DRGFQPVQ-VHSLQSKLRRDDIKWEQ

>XP\_036011358.1/1-438 centrosomal protein CEP57L1 isoform X8 [Mus musculus]

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------------------------------------------------------------M-ALV-------

---------------------------------------------------------------KICM-----

----------------------------------------------TMDSELSQSMV----GSYLNPP----

-E-------RM-HLPSFTQNEAF------QNCH--PG-----TP----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRRLELERTQAEDNLNLLSREAAQYKKALEEETNERNLAHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLHVLEKECLRLTATRQTAEDKIKCLEEKLKEEEHQRRLFQD

RACELQTGFEISKILMSTVSNSKHCKE---KKKQPK--------------------------KTNCLKREPP

QQRDHKFRTPTFER----------------------------------------------------------

-KK----PFRT-TS-QA-RANPQSSGEPVSICDSLSELLMTMEEELDQMNMEHRE---LLRQMMQPGNHSVS

EDIEQELEQLAKKMESKGDQISKLKKHQDSVR--KLQEKIENSRI-NESSGIH---GNPKGSKNLKTS--PR

KCVSETSSFQR-DRGFQPVQ-VHSLQSKLRRDDIKWEQ

>XP\_036011355.1/1-447 centrosomal protein CEP57L1 isoform X5 [Mus musculus]

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---------------------------------------------------MT-------------------

---------------------------------------------------------NARM-THY-------

--------------------------------------------------------------QSLLL-----

-------------------TKQ------------------------TMDSELSQSMV----GSYLNPP----

-E-------RM-HLPSFTQNEAF------QNCH--PG-----TP----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRRLELERTQAEDNLNLLSREAAQYKKALEEETNERNLAHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLHVLEKECLRLTATRQTAEDKIKCLEEKLKEEEHQRRLFQD

RACELQTGFEISKILMSTVSNSKHCKE---KKKQPK--------------------------KTNCLKREPP

QQRDHKFRTPTFER----------------------------------------------------------

-KK----PFRT-TS-QA-RANPQSSGEPVSICDSLSELLMTMEEELDQMNMEHRE---LLRQMMQPGNHSVS

EDIEQELEQLAKKMESKGDQISKLKKHQDSVR--KLQEKIENSRI-NESSGIH---GNPKGSKNLKTS--PR

KCVSETSSFQR-DRGFQPVQ-VHSLQSKLRRDDIKWEQ

>XP\_036011356.1/1-445 centrosomal protein CEP57L1 isoform X6 [Mus musculus]

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---------------------------------------------------MP-------------------

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--------------------------------------------------------------GDVYR-----

-------------------TRK------------------AE-QIKTMDSELSQSMV----GSYLNPP----

-E-------RM-HLPSFTQNEAF------QNCH--PG-----TP----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRRLELERTQAEDNLNLLSREAAQYKKALEEETNERNLAHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLHVLEKECLRLTATRQTAEDKIKCLEEKLKEEEHQRRLFQD

RACELQTGFEISKILMSTVSNSKHCKE---KKKQPK--------------------------KTNCLKREPP

QQRDHKFRTPTFER----------------------------------------------------------

-KK----PFRT-TS-QA-RANPQSSGEPVSICDSLSELLMTMEEELDQMNMEHRE---LLRQMMQPGNHSVS

EDIEQELEQLAKKMESKGDQISKLKKHQDSVR--KLQEKIENSRI-NESSGIH---GNPKGSKNLKTS--PR

KCVSETSSFQR-DRGFQPVQ-VHSLQSKLRRDDIKWEQ

>XP\_021029765.1/1-445 centrosomal protein CEP57L1 isoform X2 [Mus caroli]

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---------------------------------------------------MP-------------------

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--------------------------------------------------------------GDVYR-----

-------------------TRK------------------TE-QIKTMDSELSQSMV----GSYLNPP----

-E-------RM-YLPSFTQNEAF------QNCH--PG-----TP----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRRLELERTQAEDNLNLLSREAAQYKKALEEETNERNLAHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLHVLEKECLRLTATQQTAEDKIKCLEEKLKEEEHQRRLFQD

RACELQTGFEISKILMSTVSNSKHCKK---KKKQPK--------------------------KINCLKREPP

QQRDHKFRRPTFES----------------------------------------------------------

-KK----PFRT-TS-QA-RANPQSSGEPVSICDSLSELLMTMEEELDQMNMEHRE---LLRQMIQPGNHSVS

EDIEQELEQLAKKMESKGDQISKLKKHQDSVR--KLQEKIENSRI-NESSGVH---GNPKGSKNLKTS--PR

KCVSETSSFQR-DRRFQPVQ-VHSLQTKLRRDDIKWEQ

>XP\_036011353.1/1-455 centrosomal protein CEP57L1 isoform X3 [Mus musculus]

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---------------------------------------------------MP-------------------

---------------------------------------------------------PRHL-SLPA---NQR

-----FWR-PW-------------------------------------------------LTGSVHL-----

----------------------------------------------TMDSELSQSMV----GSYLNPP----

-E-------RM-HLPSFTQNEAF------QNCH--PG-----TP----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRRLELERTQAEDNLNLLSREAAQYKKALEEETNERNLAHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLHVLEKECLRLTATRQTAEDKIKCLEEKLKEEEHQRRLFQD

RACELQTGFEISKILMSTVSNSKHCKE---KKKQPK--------------------------KTNCLKREPP

QQRDHKFRTPTFER----------------------------------------------------------

-KK----PFRT-TS-QA-RANPQSSGEPVSICDSLSELLMTMEEELDQMNMEHRE---LLRQMMQPGNHSVS

EDIEQELEQLAKKMESKGDQISKLKKHQDSVR--KLQEKIENSRI-NESSGIH---GNPKGSKNLKTS--PR

KCVSETSSFQR-DRGFQPVQ-VHSLQSKLRRDDIKWEQ

>XP\_021029764.1/1-455 centrosomal protein CEP57L1 isoform X1 [Mus caroli]

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---------------------------------------------------MP-------------------

---------------------------------------------------------PRHL-SLPA---NQR

-----FWR-PW-------------------------------------------------LTGSVHL-----

-------------------T---------------------------MDSELSQSMV----GSYLNPP----

-E-------RM-YLPSFTQNEAF------QNCH--PG-----TP----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRRLELERTQAEDNLNLLSREAAQYKKALEEETNERNLAHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLHVLEKECLRLTATQQTAEDKIKCLEEKLKEEEHQRRLFQD

RACELQTGFEISKILMSTVSNSKHCKK---KKKQPK--------------------------KINCLKREPP

QQRDHKFRRPTFES----------------------------------------------------------

-KK----PFRT-TS-QA-RANPQSSGEPVSICDSLSELLMTMEEELDQMNMEHRE---LLRQMIQPGNHSVS

EDIEQELEQLAKKMESKGDQISKLKKHQDSVR--KLQEKIENSRI-NESSGVH---GNPKGSKNLKTS--PR

KCVSETSSFQR-DRRFQPVQ-VHSLQTKLRRDDIKWEQ

>XP\_052020247.1/1-445 centrosomal protein CEP57L1 isoform X4 [Apodemus sylvaticus]

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---------------------------------------------------------------MPG------

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----------------------------------DVYRTRKTEQIKTMDSELSHSMV----GSYLNPP----

-E-------RM-YLPSFTQNEAF------QNHH--LG-----NS----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIHRLELERTQAEDNLNLLSREAAQYKKALEEETTERDLAHEELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLHVLEKECLRLTATQQTAEDKIKYLEEKLKEEEHQRRLFQD

KACELQTGFEISKILMSTVSNSKHCKE---KKKLPK--------------------------KTNCLKREPP

QQMDHKFRVPTFEK----------------------------------------------------------

-EK----PFRA-TS-QA-RANAHSSGEPVSICDSLSELLMTMQEELAQMNMEHRE---LLRQMMQTESHSVS

EDIELELEQLVKKMESKGDQISKLKKHQDSVR--KLQEKVENSRI-NESSGLH---GHPKGSKNLKTS--PR

KCVSETSAFQR-DSSFQPVQ-VHSLQAKLRRDDIKWEQ

>XP\_052020246.1/1-449 centrosomal protein CEP57L1 isoform X3 [Apodemus sylvaticus]

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---------------------------------------------------MI-------------------

------------------------------------------------------------T-PVPG--DP--

-----------------------------------------------------------KLSSC--------

-----------------------FHGY------------------QTMDSELSHSMV----GSYLNPP----

-E-------RM-YLPSFTQNEAF------QNHH--LG-----NS----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIHRLELERTQAEDNLNLLSREAAQYKKALEEETTERDLAHEELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLHVLEKECLRLTATQQTAEDKIKYLEEKLKEEEHQRRLFQD

KACELQTGFEISKILMSTVSNSKHCKE---KKKLPK--------------------------KTNCLKREPP

QQMDHKFRVPTFEK----------------------------------------------------------

-EK----PFRA-TS-QA-RANAHSSGEPVSICDSLSELLMTMQEELAQMNMEHRE---LLRQMMQTESHSVS

EDIELELEQLVKKMESKGDQISKLKKHQDSVR--KLQEKVENSRI-NESSGLH---GHPKGSKNLKTS--PR

KCVSETSAFQR-DSSFQPVQ-VHSLQAKLRRDDIKWEQ

>XP\_021060543.1/1-429 centrosomal protein CEP57L1 isoform X1 [Mus pahari]

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-----------------------------------------------MDSEFSHSMI----GSYLNPP----

-E-------RM-YLPSFTQNEAF------QNCQ--PG-----NS----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRRLELERIQAEDNLNLLSREAAKYKKALEEETSERDLAHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLHVLEKECLRLTATQRTAEDRIKYLEEKLKEEEHQRRLFQD

RACELQTGFEISKILMSTVSNSKHCKE---KKKLPK--------------------------KTNCLKREPP

QQMDHKFKVPTFER----------------------------------------------------------

-EK----PFRT-TS-QA-RANPHSSGEPVSICDSLSELLMTMEEELDQMNMEHRE---LLRQMMQPGNHSVS

EDIEHELEQLVRKMESKGHQISKLKKHQDRVR--KLQEKIENARI-NESSGIH---GNPKGSKNLKTS--PR

KCVSETSSFQR-DRSFQPVQ-VHSLQTKLRRDDIKWEQ

>XP\_031204127.1/1-431 centrosomal protein CEP57L1 isoform X4 [Mastomys coucha]XP\_031204128.1 centrosomal protein CEP57L1 isoform X4 [Mastomys coucha]

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---------------------------------------------MTMDSELSHSMV----GSYLKPP----

-E-------RT-YLPSFTQNEAV------QNYH--PG-----NS----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRCLELERTQAEDNLNLLSREAAQYKKALEEESNERNLAHEELIKQKKDISIQ

LSSARSRCILLEKQLEYTKRMVLSVEREKTMILEQQ------------------------------------

-----------TQLQREKEQDQMKLHAKLEKLHILEKECLKLTVTQQTAEDKIKYLEEKLKEEEHQRRLFQD

KACELQTGFEISKILMSTVSNSKHCKE---KKKLPK--------------------------KTNCLKRGPP

QPPDHKFRAPAFER----------------------------------------------------------

-AK----PFRT-TA-QT-RANPHSSGEPVSICDSLSELLMTMQEELDQMNMEHRE---LLRQLMQTESQSVS

EDIEQELEQLVKKMESKGDQISLLKRHQDSVR--KLQEKVENSRI-NESSGIH---GNPKGSKNLKNS--PR

KCVSETSAFQR-NRSFQPVQ-VHSLQTKLRRDDIKWEQ

>XP\_031204124.1/1-445 centrosomal protein CEP57L1 isoform X2 [Mastomys coucha]

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--------------------------------------------------------MPR------------D

-----VYRTRK-------------------------------------------------------------

---------------------------------------TEQ--IKTMDSELSHSMV----GSYLKPP----

-E-------RT-YLPSFTQNEAV------QNYH--PG-----NS----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRCLELERTQAEDNLNLLSREAAQYKKALEEESNERNLAHEELIKQKKDISIQ

LSSARSRCILLEKQLEYTKRMVLSVEREKTMILEQQ------------------------------------

-----------TQLQREKEQDQMKLHAKLEKLHILEKECLKLTVTQQTAEDKIKYLEEKLKEEEHQRRLFQD

KACELQTGFEISKILMSTVSNSKHCKE---KKKLPK--------------------------KTNCLKRGPP

QPPDHKFRAPAFER----------------------------------------------------------

-AK----PFRT-TA-QT-RANPHSSGEPVSICDSLSELLMTMQEELDQMNMEHRE---LLRQLMQTESQSVS

EDIEQELEQLVKKMESKGDQISLLKRHQDSVR--KLQEKVENSRI-NESSGIH---GNPKGSKNLKNS--PR

KCVSETSAFQR-NRSFQPVQ-VHSLQTKLRRDDIKWEQ

>XP\_031204123.1/1-461 centrosomal protein CEP57L1 isoform X1 [Mastomys coucha]

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---------------------------------------------------MR-------------------

------------------------------------------------------DAGPRAH-ALSAALSVLD

-----VWR-RW-------------------------------------------------------------

---------------------------------------LEEGGGKTMDSELSHSMV----GSYLKPP----

-E-------RT-YLPSFTQNEAV------QNYH--PG-----NS----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRCLELERTQAEDNLNLLSREAAQYKKALEEESNERNLAHEELIKQKKDISIQ

LSSARSRCILLEKQLEYTKRMVLSVEREKTMILEQQ------------------------------------

-----------TQLQREKEQDQMKLHAKLEKLHILEKECLKLTVTQQTAEDKIKYLEEKLKEEEHQRRLFQD

KACELQTGFEISKILMSTVSNSKHCKE---KKKLPK--------------------------KTNCLKRGPP

QPPDHKFRAPAFER----------------------------------------------------------

-AK----PFRT-TA-QT-RANPHSSGEPVSICDSLSELLMTMQEELDQMNMEHRE---LLRQLMQTESQSVS

EDIEQELEQLVKKMESKGDQISLLKRHQDSVR--KLQEKVENSRI-NESSGIH---GNPKGSKNLKNS--PR

KCVSETSAFQR-NRSFQPVQ-VHSLQTKLRRDDIKWEQ

>XP\_034380762.1/1-455 centrosomal protein CEP57L1 isoform X1 [Arvicanthis niloticus]

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---------------------------------------------------MP-------------------

---------------------------------------------------------PRHL-SLPA---NQR

-----FWR-RW-------------------------------------------------LTGSAHL-----

-------------------T---------------------------MDSELSHSVV----GSYLNPP----

-E-------RM-CPPSFTQNEAF------QNYH--PG-----NS----LKMCNSLN-------NQ-------

-------ALVSALKTLQEKIRRLELERTQAEDNLNLLSREAAQYKKALEMESNERNLAHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTVILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLHVLEKECLRLTATQQNAEDKIKYLEEKLKEEEHQRRLFQD

KACELQTGFEISKILMSTVSNSKHCKE---KKKLPK--------------------------KTNCLKREPR

QQMDHKFRAPTFKR----------------------------------------------------------

-ET----PFRV-TA-QA-RANSHSSGEPVSVCDSLSELMMTMQDELDQMNMEHRE---LLRQMIQTESRSVS

EDLEHELDRLVQKMESKEDQISRLKKHQDSVR--KLQEKVENSRI-NESSGIH---GNPKRSKKLKTS--PQ

KCVSETSAFQR-DSSFQPVQ-VHSLQTKLRRDDIKWEQ

>XP\_028624841.1/1-479 LOW QUALITY PROTEIN: centrosomal protein CEP57L1 [Grammomys surdaster]

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---------------------------------------------------MP-------------------

---------------------------------------------------------PRHL-SLPA---NQR

-----FWR-PW-------------------------------------------------LTGSVRL-----

-------------------T---------------------------MDSELSHSVV----GSYLNPP----

-E-------RT-CLPSFTQNEAL------QNYH--PG-----NS----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRRLELERTQAEDNLNLLSREAAQYKKALEVETSERDLAHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQKEKEQDQMKLHAKLEKLHVLEKECLRLTATQQTAEDKIKYLEEKLKEEEHQRRLFQD

KACELQTGFEISKILMSTVSNSKHCKE---KKKLPK--------------------------KTNCLKRSPP

QQADHKFRAPAFERG-------K-------------------------MVYPCG-L--DDLQKPVLATEAWC

LSK----PFRM-TA-QT-RANSHSSGEPVSICDSLSELLMTMQAELDQMNMEHRE---LLRQMMQTESHSIS

EDIEHELEQLVKKMDSKGDQISKLKKHRDSVR--KLQERVENSRI-NESSGIH---GNPKGSKNLKTS--PR

KCVSETSAFQR-DSGFQPVQ-VHSLQTKLRRDDITWEQ

>NP\_001017448.2/1-446 centrosomal protein CEP57L1 [Rattus norvegicus]

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---------------------------------------------------MP-------------------

---------------------------------------------------------RDVY-RTRK---NEQ

-----I------------------------------------------------------------K-----

-------------------T---------------------------MDAELPHSMI----GSYLNPP----

-E-------RM-YLPSFSQTEAS------QNCH--PG-----SS----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRRLELERTQAEDNLNLLSREAAQYKKALEEETNERNLAHEELTRQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECLRLTTTQQTAEEKIKYLEEKLKEEEHQRRLFQD

RACELQTGLEISKILMSTVSSSKLCNE---RKKLPK--------------------------KTNCLKREPP

QHTDCRFRGPASER------------------------------------------------------E---

-RP----PFRM-TS-SA-RAEPHSSGEPFSICDNLSELLRTMQDELDQMNMEHRE---LLRQIAQTGSHSDS

EELEQELEHLARKMESKEDQISKLQKHQDRVR--KLQEKVENSRI-NESSGIH---GNPKRSKNLKTS--PR

KCLSETSAFQK-DRSFQPVK-VHSLPPRLRRDDVKWEQ

>XP\_006256624.1/1-471 centrosomal protein CEP57L1 isoform X1 [Rattus norvegicus]

--------------------------------------------------------MLPTRSVCDRKYNSQ-

---------------------------------------------------MP-------------------

---------------------------------------------------------PRHS-SLPA---NQR

-----FWR-PW-------------------------------------------------LTGSVCL-----

-------------------T---------------------------MDAELPHSMI----GSYLNPP----

-E-------RM-YLPSFSQTEAS------QNCH--PG-----SS----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIRRLELERTQAEDNLNLLSREAAQYKKALEEETNERNLAHEELTRQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECLRLTTTQQTAEEKIKYLEEKLKEEEHQRRLFQD

RACELQTGLEISKILMSTVSSSKLCNE---RKKLPK--------------------------KTNCLKREPP

QHTDCRFRGPASER------------------------------------------------------E---

-RP----PFRM-TS-SA-RAEPHSSGEPFSICDNLSELLRTMQDELDQMNMEHRE---LLRQIAQTGSHSDS

EELEQELEHLARKMESKEDQISKLQKHQDRVR--KLQEKVENSRI-NESSGIH---GNPKRSKNLKTS--PR

KCLSETSAFQK-DRSFQPVK-VHSLPPRLRRDDVKWEQ

>XP\_032744700.1/1-471 centrosomal protein CEP57L1 isoform X5 [Rattus rattus]

--------------------------------------------------------MLPTRSVCDRKYNSQ-

---------------------------------------------------MP-------------------

---------------------------------------------------------PRHS-SLPA---NQR

-----FWR-PW-------------------------------------------------LTGSVCL-----

-------------------T---------------------------MDAELSHSMI----GSYLNPP----

-E-------RM-YLPSFSQTEAS------QNCH--PG-----SS----PKMFSSPN-------NQ-------

-------ALVSALKTLQEKIRRLELERTQAEDSLNLLSREAAQYKKALEEETNERNLAHEELTRQKRDISIQ

LSSAQSRCSLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECLRLTTTQQTAEEKIKYLEEKLKEEEHQRRLFQD

RACELQTGLEISKILMSTVSNPKLCKE---RKKLPK--------------------------KPNCLKRELL

QHTDGKFSGPASER------------------------------------------------------E---

-TP----PFRM-TS-SA-RAKPHSSGEPFSICDSLSELLRTMQDELDQMNMEHRE---LLRQIAQTGSHSDS

EELEQELEHLARKMESKEDQISKLQKHQDRVR--KLQEKVENSRI-NESSGIH---GNPKRSKNLKTS--PR

KCLSETSAFQK-DRSFQPVK-VHSLPPRLRRDDVKWEQ

>XP\_051031529.1/1-482 centrosomal protein CEP57L1 [Phodopus roborovskii]

--------------------------------------------------------MLPTPAVCDRNYNPH-

---------------------------------------------------RP-------------------

---------------------------------------------------------PRRR-PLPA---NQR

-----SRRSSG-------------------------------------------------LTGSVHL-----

-------------------T---------------------------MDSELSHSVI----GSYLNPP----

-E-------RM-YLPSFIQNEPS------QNGH--PV-----NSEVIPPKMFNSPN-------NQ-------

-------ALVSALKTLQEKIHRLELERTQAEDNLNSLSREAAQYKKALENETNERNLAHQELIKQKKDISFQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKAMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQQTAEDKIRYLEEKLKEEEHQRKLFQD

RACELQTGLEISKILMSTVSHSKSCKE---KKKPLK--------------------------KTKCLKRDPP

QRTAPMPRALPLERE-------T------------------------------------------------C

LHK----PLRT-TS-QG-KAGPPNSGEPVSMCDSLSELLMAMQEELDQMTVEHSE---LLKHMMQTGSHSVP

DDMEQELEQLVKKMESKGAQISKLKKHQDSVR--KLQEKIQDSRI-KGPSGVLREDGNPKGPKNMKNI--PR

KSLNDTNPFQK-NSSFRPIH-VHNLLGKLRRDDIKWEQ

>XP\_007653002.1/1-478 centrosomal protein CEP57L1 isoform X3 [Cricetulus griseus]XP\_027258021.1 centrosomal protein CEP57L1 isoform X3 [Cricetulus griseus]

--------------------------------------------------------MLPTPCVCDRNYNPH-

---------------------------------------------------MP-------------------

---------------------------------------------------------PQLL-SQPA---NQR

-----LWR-PG-------------------------------------------------LTGNVHLNIYSS

LVH--------------MWT---------------------------MNPELSHNVI----GSYLNPP----

-E-------RM-YFPSFIQNEAS------QNGY--PV-----DSEVIPPKMFNSPN-------NQ-------

-------ALVSALKTLQEKIHRLELERTQAEDNLNSLSREAAQYKKALESETNERDLAHRELIKQKKNISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKAMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQQTAEDKIKYLEEKLKEEEHHRKLFQD

KACELQTGLEISKILMSTVSHSKLCKE---KKKPLK--------------------------KTKCLKRDPP

QQMDP-------------------------------------------------------------------

KFR----ALSL-QGGKG-KAGPPNSEEPISICDNLSELLMAMQEELDQMTVEHKE---LLKEMMQPGRY--S

DDIEHELEQLAKKIESKGDQISKLKKHQDSVR--KLQQKVQNSRI-NESSCVLQEHDNPKGPKNIKTS--SR

KGLNETNPLQK-NSSFRPVQ-VHNLQVKLRRDDIKWEQ

>XP\_007652991.1/1-489 centrosomal protein CEP57L1 isoform X1 [Cricetulus griseus]XP\_027258019.1 centrosomal protein CEP57L1 isoform X1 [Cricetulus griseus]

--------------------------------------------------------MLPTPCVCDRNYNPH-

---------------------------------------------------MP-------------------

---------------------------------------------------------PQLL-SQPA---NQR

-----LWR-PG-------------------------------------------------LTGNVHLNIYSS

LVH--------------MWT---------------------------MNPELSHNVI----GSYLNPP----

-E-------RM-YFPSFIQNEAS------QNGY--PV-----DSEVIPPKMFNSPN-------NQ-------

-------ALVSALKTLQEKIHRLELERTQAEDNLNSLSREAAQYKKALESETNERDLAHRELIKQKKNISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKAMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQQTAEDKIKYLEEKLKEEEHHRKLFQD

KACELQTGLEISKILMSTVSHSKLCKE---KKKPLK--------------------------KTKCLKRDPP

QQMDPKFRALSLQGG-------K------------------------------------------------C

LYK----SLGT-TS-QG-KAGPPNSEEPISICDNLSELLMAMQEELDQMTVEHKE---LLKEMMQPGRY--S

DDIEHELEQLAKKIESKGDQISKLKKHQDSVR--KLQQKVQNSRI-NESSCVLQEHDNPKGPKNIKTS--SR

KGLNETNPLQK-NSSFRPVQ-VHNLQVKLRRDDIKWEQ

>XP\_007653015.1/1-429 centrosomal protein CEP57L1 isoform X6 [Cricetulus griseus]XP\_027258026.1 centrosomal protein CEP57L1 isoform X6 [Cricetulus griseus]

--------------------------------------------------------MLPTPCVCDRNYNPH-

---------------------------------------------------MP-------------------

---------------------------------------------------------PQLL-SQPA---NQR

-----LWR-PG-------------------------------------------------LTGNVHLNIYSS

LVH--------------MWT---------------------------MNPELSHNVI----GSYLNPP----

-E-------RM-YFPSFIQNEAS------QNGY--PV-----DSEVIPPKMFNSPN-------NQ-------

-------------------------------------------------------------------DISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKAMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQQTAEDKIKYLEEKLKEEEHHRKLFQD

KACELQTGLEISKILMSTVSHSKLCKE---KKKPLK--------------------------KTKCLKRDPP

QQMDPKFRALSLQGG-------K------------------------------------------------C

LYK----SLGT-TS-QG-KAGPPNSEEPISICDNLSELLMAMQEELDQMTVEHKE---LLKEMMQPGRY--S

DDIEHELEQLAKKIESKGDQISKLKKHQDSVR--KLQQKVQNSRI-NESSCVLQEHDNPKGPKNIKTS--SR

KGLNETNPLQK-NSSFRPVQ-VHNLQVKLRRDDIKWEQ

>XP\_051020245.1/1-474 centrosomal protein CEP57L1 isoform X2 [Acomys russatus]

--------------------------------------------------------MLPTRSVCDRNYNPQ-

---------------------------------------------------MP-------------------

---------------------------------------------------------PRHFLSLPA---NQR

-----FWR-PG-------------------------------------------------LTGSICL-----

-------------------A---------------------------MDSELSHSVL----GSYLNPP----

-E-------RR-FAPPFPEKGAS------QNCH--PV-----NS----AKTFNSPN-------NQ-------

-------ALVSALKTLQEKIHRLDLERTQAEDNLNALSREAAEYKRALENETSERNLAHQELSKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKAMILEQQ------------------------------------

-----------AQLQWEKEQDQMKLHAKLEKLDVLEKECFRLTATQQTAEDKIKYLEEKLKEEEHQRKLFQD

KACELQTGLEIRKILMSTISNSKHCKE---KKKPPK--------------------------KTKCSKTEPP

LQMDHKFRAPTFAR------------------------------------------------------EARC

PSK----PLGT-TP-RA-DAEPHNSGEPVSICDNLSELLLAMQDELTQMSVEHKE---LLKRMRQTGSQSVS

EDIEHELDQLVRKMESKGDQIAKLRKHQDIVC--KLQQRVQNSRI-NKSSGIHQED-----SKNMKNS--PR

KCVNEANLFQK-NSSSHPVQ-VHNVQLKLRRDDITWEQ

>XP\_021504731.1/1-468 centrosomal protein CEP57L1 isoform X4 [Meriones unguiculatus]

--------------------------------------------------------MLPTRFVCDRNYNSQ-

---------------------------------------------------MP-------------------

---------------------------------------------------------PRRFLWLPA---NQR

-----FRR-PG-------------------------------------------------LTGNDHL-----

-------------------T---------------------------MNSDLAQSVV----GSYLNPP----

-K-------SM-YVPSFRQNEAF------QNCH--PV-----NS----SKTFNSPN-------NQ-------

-------ALVSALKTLQEKIHRLELERTQAEDNLNVLSREAAQYKKALENETEERNLAHQELIKQKKDISIQ

LSSAQSRCLLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------TQLQREKEQDQMKLHAKLEKLDVLEKECFRLTRTQQTAEDKIKYLEEKLKEEEHQRKLFQD

KAAEQ----------------------------------------------------------TNCIKREPP

QQTDHTSRAQTFERE-------K-------------------------MVEPSG-L--CNLQKPLLASEARS

LSK----SLRT-AS-LA-TAETRNSGERISICDNLSELLMAMQDELEQMSMEHKE---LLKRMRHSRSHVVS

EDIEQELEQLVKKMEKKEDQISKLIKHQDSVR--KLQRKVQNSRI-KESSGIQKGDSHPKGSKSMKKS--PR

KCWDESNPFLK-NS-FHSTQ-VHSLQATLRREDIKWEQ

>XP\_060229488.1/1-497 centrosomal protein CEP57L1 isoform X1 [Meriones unguiculatus]

--------------------------------------------------------MLPTRFVCDRNYNSQ-

---------------------------------------------------MP-------------------

---------------------------------------------------------PRRFLWLPA---NQR

-----FRR-PG-------------------------------------------------LTGNDHL-----

-------------------T---------------------------MNSDLAQSVV----GSYLNPP----

-K-------SM-YVPSFRQNEAF------QNCH--PV-----NS----SKTFNSPN-------NQ-------

-------ALVSALKTLQEKIHRLELERTQAEDNLNVLSREAAQYKKALENETEERNLAHQELIKQKKDISIQ

LSSAQSRCLLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------TQLQREKEQDQMKLHAKLEKLDVLEKECFRLTRTQQTAEDKIKYLEEKLKEEEHQRKLFQD

KAAELHTGLEVNKILMSTISNSKHCKK---KKKQRK--------------------------QTNCIKREPP

QQTDHTSRAQTFERE-------K-------------------------MVEPSG-L--CNLQKPLLASEARS

LSK----SLRT-AS-LA-TAETRNSGERISICDNLSELLMAMQDELEQMSMEHKE---LLKRMRHSRSHVVS

EDIEQELEQLVKKMEKKEDQISKLIKHQDSVR--KLQRKVQNSRI-KESSGIQKGDSHPKGSKSMKKS--PR

KCWDESNPFLK-NS-FHSTQ-VHSLQATLRREDIKWEQ

>XP\_055472150.1/1-498 centrosomal protein CEP57L1 isoform X1 [Psammomys obesus]

--------------------------------------------------------MLPTRFVCDRNYNSQ-

---------------------------------------------------MP-------------------

---------------------------------------------------------PRRFLWLPA---NQR

-----FRR-PG-------------------------------------------------LTGNVHL-----

-------------------T---------------------------MNSDLAQSVV----GSYLNPP----

-E-------SM-YVPSFRQNEAF------QNCH--PV-----NS----SKTFNSPN-------NQ-------

-------ALVSALKTLQEKIHRLELERTQAEDNLNVLSKEAAQYKKALENETEERNLAHQELIKQKKDISIQ

LSSAQSRCLLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------TQLQREKEQDQMKLHAKLEKLDVLEKECFRLTRTQQTAEDKIKYLEEKLKEEEHQRKLFQD

KASELQTGLEVNKMLMSTISNSKHCKK---KKKQRK--------------------------QTNCIKREPP

QQTGHTSRAQTFERE-------K-------------------------MVEPSR-L--CNLQKPLPVSEARS

LSK----PLRT-AS-LA-TAEARNSGEPISICDNLSELLVAMQDELDQMSMEHKE---LLKRMRHARSHVVS

EDIEQELEQLVKKMEKKEDQISKLMKHQDSVR--KLHRKVQNSRI-KESSGIQRGDGHPKGSKSMKKS--PR

KCWDETNPFLK-NSNFRPTQ-VHSLQAMLRREDIKWEQ

>XP\_060229489.1/1-471 centrosomal protein CEP57L1 isoform X3 [Meriones unguiculatus]

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------------------------------------------------------------MHGDVYRVRKRH

----------------QIKT---------------------------MNSDLAQSVV----GSYLNPP----

-K-------SM-YVPSFRQNEAF------QNCH--PV-----NS----SKTFNSPN-------NQ-------

-------ALVSALKTLQEKIHRLELERTQAEDNLNVLSREAAQYKKALENETEERNLAHQELIKQKKDISIQ

LSSAQSRCLLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------TQLQREKEQDQMKLHAKLEKLDVLEKECFRLTRTQQTAEDKIKYLEEKLKEEEHQRKLFQD

KAAELHTGLEVNKILMSTISNSKHCKK---KKKQRK--------------------------QTNCIKREPP

QQTDHTSRAQTFERE-------K-------------------------MVEPSG-L--CNLQKPLLASEARS

LSK----SLRT-AS-LA-TAETRNSGERISICDNLSELLMAMQDELEQMSMEHKE---LLKRMRHSRSHVVS

EDIEQELEQLVKKMEKKEDQISKLIKHQDSVR--KLQRKVQNSRI-KESSGIQKGDSHPKGSKSMKKS--PR

KCWDESNPFLK-NS-FHSTQ-VHSLQATLRREDIKWEQ

>XP\_006982835.1/1-457 centrosomal protein CEP57L1 isoform X1 [Peromyscus maniculatus bairdii]XP\_006982836.1 centrosomal protein CEP57L1 isoform X1 [Peromyscus maniculatus bairdii]XP\_042117947.1 centrosomal protein CEP57L1 isoform X1 [Peromyscus maniculatus bairdii]

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-----------------------------------------------MDSELSPSVI----GSYLNPP----

-E-------RM-YLPSFTQNEAS------QNCR--PV-----NSEVTSPKMFNSSN-------NQ-------

-------ALVSALKTLQEKIYRLELERTQAEDNLNSLSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCVLLEKQLEYTKRMVLNVEREKAMILEQQ------------------------------------

-----------AQLQREKEEDQLKLHAKLAKLDVLEQECFRLTATQQTAEDKIKYLEEKLKEEEHQRKLFQD

KACELQTGLEISKILMSTVSHSQHYKE---KKKPPK--------------------------KTKCLKREPP

QQMDPRFRALFLERE-------K-------------------------MVHPHG-L--YYLQKPVLVPEPQS

LYK----ALRT-SS-QA-KVLPLDSGEPVSTCDNLSELLMAMQEELDQMIVEHRE---LQKQMLQDGSHSVS

DDAEHALEQLVRKMERKGDQISKLKKHQDSVR--KLQQRVQSSRI-NEPS-IHWEAGKPKGPK--KNS--PR

KCLNETNPFQK-NSSIHPVQ-VHNLQVKLRRDDIQWEQ

>XP\_028746069.1/1-457 centrosomal protein CEP57L1 isoform X1 [Peromyscus leucopus]XP\_028746070.1 centrosomal protein CEP57L1 isoform X1 [Peromyscus leucopus]XP\_037056226.1 centrosomal protein CEP57L1 isoform X1 [Peromyscus leucopus]XP\_037056227.1 centrosomal protein CEP57L1 isoform X1 [Peromyscus leucopus]XP\_037056228.1 centrosomal protein CEP57L1 isoform X1 [Peromyscus leucopus]

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-----------------------------------------------MDSELSQSVI----GSYLNPP----

-E-------RI-YLPSFTQNEAS------QNCH--PV-----NSEVTSPKMFNSPN-------NQ-------

-------ALVSALKTLQEKIYRLELERTQAEDNLNSLSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCVLLEKQLEYTKRMVLNVEREKAMILEQQ------------------------------------

-----------AQLQREKEEDQLKLHAKLAKLDVLEQECFRLTTTQQTAEDKIKYLEEKLKEEEHQRKLFQD

KACELQTGLEISKILMSTVSHSQHCKE---KKKPPK--------------------------KTKCLKREPP

QQMDPRFRALFLERE-------K-------------------------MVHPHG-L--YYLQKPVLVPEAQS

LYK----ALRT-SS-QA-KVLPLNSGDTVSTCDNLSELLMAMQEELDQMIVEHRE---LQKQMLQAGSHSLS

DDAEHALEQLVRKMESKGDQISKLKKHQDSVR--KLQQRVQSSRT-NEPS-IHWEAGKPKGPK--KNS--PR

KCLNETNPFQK-NSSVHPVQ-VHNLQVKLRRDDIQWEQ

>XP\_052607478.1/1-483 centrosomal protein CEP57L1 isoform X1 [Peromyscus californicus insignis]

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---------------------------------------------------MP-------------------

---------------------------------------------------------PQHFWSLWA---NQR

-----FWR-PG-------------------------------------------------LTGNVHP-----

-------------------T---------------------------MDSELSQSVI----GSYLNPP----

-E-------RM-YLPSFTQNEVS------QNCH--PV-----NSEVTS-KMFNSPN-------NQ-------

-------ALVSALKTLQEKIYRLELERTQAEDSLNSLSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCVLLEKQLEYTKRMVLNVEREKAMILEQQ------------------------------------

-----------AQLQREKEEDQLKLHAKLAKLDVLEKECFRLTTTQQTAEDKIKYLEEKLKEEEHQRKLFQD

KACELQTGLEISKILMSTVSHSQHCKE---KKKPPK--------------------------KTKCLKREPP

QQMDPRFRALFLERE-------K-------------------------MMHPHG-L--YYLQKPALVPEPQT

LSK----ALRT-RS-QA-KALPLSSGEPVSICDNLSELLMAMQEELDQMIVEHKE---LRKQMLQAGSHLVS

DDAEHVLEQLVRKMESKGDQISKLKKHQDSVR--KLQQKVQSSRI-NDPS-IHWEAGNPKGPK--KNS--PR

KCLNETNPFQK-NSSVHPVQ-VHNLQVKLRRDDIQWEQ

>XP\_059128475.1/1-484 centrosomal protein CEP57L1 isoform X2 [Peromyscus eremicus]

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---------------------------------------------------MP-------------------

---------------------------------------------------------PQHFWSLWA---NQR

-----FWR-PG-------------------------------------------------LTGNVHL-----

-------------------T---------------------------MDSELSQSVI----GSYLNPP----

-E-------RM-YLPSFTQNEAS------QNCH--PV-----NSEVTSPKMFNSPN-------NQ-------

-------ALVSALKTLQEKIYRLELERTQAEDSLNSLSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCVLLEKQLEYTKRMVLNVEREKAMILEQQ------------------------------------

-----------AQLQREKEEDQLKLHAKLAKLDVLEQECFTLTTAQQTAEDKIKYLEEKLKEEEHQRKLFQD

KACELQTGLEISKILMSTVSHSQHCKE---KKKPPK--------------------------KTKCLKREPP

QQMDPRFRALFLEKE-------K-------------------------MTHPHG-L--HYLQKPVLVPEPQS

LYK----ALRT-SS-QA-KARPLSSGEPIFICDDLSELLMAMQEELDQMIVEHKE---LRKQMLQAGSRSVS

DDAEHVLEQLVRKMESKGDQISKLKKHQDSVR--KLQQKVQSSRI-NDPS-IHWEAGNPKGPK--KNS--PR

KCLNETNPFQK-NSSVHPVQ-VHNLQVKLRRDDIQWEQ

>XP\_036024477.1/1-498 centrosomal protein CEP57L1 isoform X1 [Onychomys torridus]

--------------------------------------------------------MLPTPSVCDRNYNSQ-

---------------------------------------------------MP-------------------

---------------------------------------------------------PQHFWLLRA---SQR

-----FW-----------------------------------------------------LTGNVHL-----

-------------------T---------------------------MDSELSQSVI----GSYLNPP----

-E-------RM-YLPSFTQNEAS------QNCH--PV-----NSEVTSPKMFNSPN-------NQ-------

-------ALVSALKTLQEKIYRLELERTQAEDNLNSLSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCVLLEKQLEYTKRMVLNVEREKAMILEQQ------------------------------------

-----------AQLQREKEEDQLKLHAKLAKLDVLEKECFRLTTTQQTAEEKIKYLEEKLKEEEHQRKLFQD

KACELQTGLEVSKILMSTVSHSQHCKE---KKKPPK--------------------------KTKCLKREPP

QQMDPRFRALFLERE-------K-------------------------MMHPHG-L--YCLQKPVLAPEPQC

LYK----ALRT-AS-QS-KALPLNSGEPASICDNLSELLMAMQEELDQMIVEHRE---LREQMTEAGSRSVS

DDAEHVLEQLVRKMESKGDQISKLKKHQDSVR--KLQQKVQSSRL-NDPS-IHWEAGSPQGPKNVKHG--PR

KCWNEPNPFQK-NSSSHPVQ-VHNLQVKLRRDDIKWEQ

>XP\_040584329.1/1-545 centrosomal protein CEP57L1 isoform X1 [Mesocricetus auratus]

--------------------------------------------------------MLPTASVCDRNYNPH-

---------------------------------------------------MP-------------------

---------------------------------------------------------PQHL-PLPA---NQR

-----FWR-PG-------------------------------------------------FTENVHL-----

-------------------T---------------------------MDPELSHSVI----GSYLNPP----

-E-------RK-YLPSFIQNEAS------QNGH--PV-----NSEVTPPKMFNSPN-------NR-------

-------ALVSALKTLQEKIHRLELERTQAEDNLNSLCREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKAMILEQQVGFWFMMLLLPQPLECCEYRREPQVPALDFQHIKDF

AQLSSALK---AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQQTAEDKIKYLEEKLKEEEHQRKLFQD

KACELQTGLEISRILMSTVSHSKLCKE---KKKPLK--------------------------KTKCLKREPP

QQMDPKFRALSLEGG-------K-------------------------MLHPYG-L--HYFQKPVLLPESRC

LYK----SLRT-TS-QD-NAEPLNSGESISICDNLSELLMAMQEELDQMTMQHRE---LLKQMMQTRSHSDS

DDIEHELEQLVKKMESKGDQISKLKKHQDSVR--KLQQKVQNSRI-NASSGFLRELGNPKGSKDTKNS--PR

KCLNETNPFQK-RVSFRPVQ-AHNLQVKLRRDDIKWEQ

>XP\_038196717.1/1-434 centrosomal protein CEP57L1 isoform X4 [Arvicola amphibius]

--------------------------------------------------------MLPTPAACDRNYNPQ-

---------------------------------------------------MP-------------------

---------------------------------------------------------PQHFRSLSA---NQR

-----FRR-PG-------------------------------------------------LTGNVHL-----

-------------------T---------------------------MDSELSPSLI----GSYLNPP----

-E-------RM-YPPSFIKNETS------QIGH--PV-----NSEVTPPKMINSPN-------NQ-------

-------ALVSALKTLQEKIHRIELERTQAEDNLNSLSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSARSRCILLEKQLEYTKRMVLNVEREKAIILEQ-------------------------------------

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---QLQTGLEISRLLMSTVSQSQPCKG---KKKPPK--------------------------KTKSLKREPP

QQMDPKCRARSLERE-------K-------------------------TISAYG-L--RSFQRPAPVAEPQC

RYQ----PLRT-AS-WG-KAVPPDSGEPVPVCDSLSDLLMAMQEELDQMAAEHRE---LLR---HTGSHSVS

DDMERQLEQLVKKMESKEGQISKLKRHQDSVR--KLQQKVQNSRI-NESSGIRREDGNPKGPKNVKNS--PR

KCWDEANPFQK-HSTCHPAQ-VHNLQVKLRKDDIKWEQ

>XP\_038196713.1/1-499 centrosomal protein CEP57L1 isoform X1 [Arvicola amphibius]

--------------------------------------------------------MLPTPAACDRNYNPQ-

---------------------------------------------------MP-------------------

---------------------------------------------------------PQHFRSLSA---NQR

-----FRR-PG-------------------------------------------------LTGNVHL-----

-------------------T---------------------------MDSELSPSLI----GSYLNPP----

-E-------RM-YPPSFIKNETS------QIGH--PV-----NSEVTPPKMINSPN-------NQ-------

-------ALVSALKTLQEKIHRIELERTQAEDNLNSLSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSARSRCILLEKQLEYTKRMVLNVEREKAIILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLNVLEKECFRLTATQQTAEDKINYLEEKLKEEEHQRKLFQD

RACELQTGLEISRLLMSTVSQSQPCKG---KKKPPK--------------------------KTKSLKREPP

QQMDPKCRARSLERE-------K-------------------------TISAYG-L--RSFQRPAPVAEPQC

RYQ----PLRT-AS-WG-KAVPPDSGEPVPVCDSLSDLLMAMQEELDQMAAEHRE---LLR---HTGSHSVS

DDMERQLEQLVKKMESKEGQISKLKRHQDSVR--KLQQKVQNSRI-NESSGIRREDGNPKGPKNVKNS--PR

KCWDEANPFQK-HSTCHPAQ-VHNLQVKLRKDDIKWEQ

>XP\_057618081.1/1-499 centrosomal protein CEP57L1 isoform X1 [Chionomys nivalis]

--------------------------------------------------------MLPTPAVCDRNYNPQ-

---------------------------------------------------MP-------------------

---------------------------------------------------------PQHFRSLSA---NQR

-----FRR-PG-------------------------------------------------LTGNVHL-----

-------------------T---------------------------MDSELSHSII----GSYLNPP----

-E-------RM-CPPLFIKNETS------QIGH--PV-----NSEVIPPKMINSPN-------NQ-------

-------ALVSALKTLQEKIHRIELERTQAEDNLNSLSREAAQYKKALENETNERNLAHEELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKAMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLNVLEKECFRLTATQQAAEDKINYLEEKLKEEEHQRKLFQD

RACELQTGLEISRLLMPTVSQSQHCKR---KKKPPK--------------------------KTKCLKREPP

QQMDPKCRAQSLERV-------K-------------------------MIGAYG-L--RSLQRPAPVTELQC

RYK----PLRT-TS-QV-KAVAPNPGEPVPICDSLSDLLMAMQEELAQMTVEHRE---LMR---QTGSHSVS

DDIEHELEQLVKKMESKEDQISKLKKHQDSVR--KLQQKVQNSRI-NEPSGIHQEDGNPKGLKNVKNS--PR

KCWDETNPFRK-HSTCHPVH-VHNVQVKLRKDDIRWEQ

>XP\_048281237.1/1-523 centrosomal protein CEP57L1 isoform X1 [Myodes glareolus]

--------------------------------------------------------MLPTPAGCDRSYNPQ-

---------------------------------------------------IP-------------------

---------------------------------------------------------PQHFRSLQA---NQR

-----FRR-PG-------------------------------------------------LTGNVLLVFCWH

VCQKRASAPRAVGGSWPSQT---------------------------MDSELSHSVI----GSYLNPP----

-E-------KM-YPPSFIKNETS------QIGH--PV-----NLEVTTPKMINSPN-------NQ-------

-------ALVSALKTLQEKIHRIELERTQAEDNLNSLSREAAQYKKALENETNERNLAHQELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKAMILEQQ------------------------------------

-----------AQLQREKEQDQMKLYAKLEKLNVLEKECFRLTATQQTAEDKINYLEEKLKEEEHQRKLFQD

RACELQTGLEISRLLMSTVSQSQHSKE---KKKPPK--------------------------KTKCLKREPP

QQMDPKCRAQSLERE-------K-------------------------VMHAYG-L--HCLQRPAPVTEPQC

RYK----PLRT-AS-RG-KAVPSNSGEPIPTCDSLSDLLMAMQEELDQMTAEHRE---LLR---QTGSHSVS

EDMEHELQQLVKKMESKEDQISKLKKHQDSVR--KLQQKVQKSRI-NESSGLHQEDGHPKGPKNMKNS--PR

KCWNETNPFQK-HSTCHPAQ-VHNLQVKLRKDDIMWEQ

>XP\_027712488.1/1-464 centrosomal protein CEP57L1 isoform X1 [Vombatus ursinus]XP\_027712497.1 centrosomal protein CEP57L1 isoform X1 [Vombatus ursinus]

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-----------------------------------------------MYAEFKHSAI----GSYRKPP----

-D-------KI-TNPSFAYHEAA-----PQDNLPKKLEP------------VSIPN-------SH-------

-------ALLLALKTLQDKIHRLELERTQAEDNLNTLSQEAALYKKALQNENNERDLAHQELIKQRKDISAQ

LSAAQIRCSILEKQLELTKKMVLNAEQEKNFTLEQQ------------------------------------

--------------QWEKGQDQMKLNEKLEKLEVLEKECVRLTTTQKTAEEKIKHLEQKLIEEEHQRKLIED

SAAQLQSGLEINRILMSSALPSQQNK----KKKSAK--------------------------EKKSSKRGL-

QQTHSKFGA--------IG---K------SANES-HFVNASV-QTILNMMKHGNSP---SLQAYPEAPERRA

ISK------RTVRC----RPTSSYSSKSTSIGDGLTDLVMAMQDELDQMSIEHQE---LLKQVQESPRLSVN

EEIEYELECSARKMEVKGEQICKLKKYQDHVN--KLQQKSQNSK--SEAFSIEPEDENHKRTKNVPVMVVTR

KGTNKTKSPQKNCSCQMPQKCFQKIQMTLRKDDIKWEQ

>XP\_020863874.1/1-466 centrosomal protein CEP57L1 isoform X1 [Phascolarctos cinereus]XP\_020863875.1 centrosomal protein CEP57L1 isoform X1 [Phascolarctos cinereus]

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-----------------------------------------------MYAEFKHSMI----GSYRKPP----

-D-------KI-TNPSVAYREAA-----PQDNLPKKLEP------------LSIPN-------SH-------

-------ALLLALKTLQDKIHRLELERTQAEDNLNTLSQEAALYKKALQNENNERNLAHQELIKQRKDISAQ

LSAAQIRCSVLEKQLELTKKVILNAEQEKNFALEQQ------------------------------------

------------QLQWEKGRDQIKLNEKLEKLEVLEKECVRLTTTQKTAEEKIKHLEQKLIEEEHQRKLIQD

SAAQLQTGLEINRILMSSVLPSQQTK----KKKSAK--------------------------GKKSSKKGL-

QQTHSKFGA--------IG---K------SANES-HFVNASV-QTILNMTKHGNSP---SLQACPEAPERRA

ISK------RTVRC----RPTSSYSSKSTSIGDGLTDLVMAMQDELDQMSIEHQE---LLKRVQESQRLSVN

AEIEYELECLARNMEVKGEQICKLKKYQDHVN--KLQQKSQNSK--SEAFSNEPEDENYKRTKNVPVMVVTR

KGTNKTKPPQENCSCHMPQNRFQKIQMTLRKDDIKWEQ

>XP\_043855651.1/1-465 centrosomal protein CEP57L1 isoform X1 [Dromiciops gliroides]XP\_043855652.1 centrosomal protein CEP57L1 isoform X1 [Dromiciops gliroides]

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-----------------------------------------------MYAELKHSMI----GSYREPP----

-D-------KI-TDPSFAYCEAA-----TQNHLPKKSQP------------LSTPN-------SH-------

-------ALLLALKTLQDKIHRLELERTQAEDNLNTLSQEAALYKKALQNENNERDLVHQELIKQRKDISAQ

LSAAQTRCSILEKQLELTKKMVLNAEQEKNLTVEQQ------------------------------------

-------------LQWEKGQDQMKLNAKLEKLEVLEKECVRLTSTQKTAEEKIKHLEQKLIEEEHQRKLIQD

RAAQLQTGLEINRILMSSVLPSQQTK----KKKAAK--------------------------GKKCSKRGL-

QQTHSKFGA--------VG---K------SPSES-HFVNASM-QSILNMMKHGNSP---SLQGCPEATERRA

ISK------RTVRC----RPTSSYSSKSTSVGDGLTDLVMAMQDELDQMSIEHQE---LLKQVQGSPRLSVN

EEIEYELECLARKMEMKGEQICKLKKYQDHVN--KLQQKSQNSE--SEEFSIQPENENHKGTKTVPVMVVTR

KGTNKTKAPPKNCSCQMPQKCFQKIRMTLRKDDVKWEQ

>XP\_031820307.1/1-466 centrosomal protein CEP57L1 isoform X1 [Sarcophilus harrisii]

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-----------------------------------------------MYAEFKHSMI----GSYRKPP----

-D-------KI-ANPSFAYCGAA-----PQDQLPKKLQP------------LSTPN-------SH-------

-------ALLLALKTLQDKIYQLELERTQAEDNLNTLSQEAALYKKALQNENNERDLAHQELIKQRKDISAQ

LSAAQTRCSILEKQLELAKKMVFNAEQEKIFALEQQ------------------------------------

------------QLQWEKGQDQMKLNAKLEKLEVLEKECVRLTTTQKTAEEKIKHLEQKLTEEEHHRKLIQD

SAAQLQTGLEINRILISSVLPSQQTK----KKKSTK--------------------------GKKSSKRGF-

QQTHSKLGA--------IG---K------SANES-HVVNSNV-KTILNMMKHGNSP---SLQGCPEANERRA

ISK------RTLRC----RPMSSYSSKSTSTGDGLTDLVMAMQDELDQMNIEHQE---LLKQIHGSPTLSAN

EEIEYELECLARKMEMKKEQICKLKKYQDHVS--KLQPKSPNSK--SEAFDIQSEEENHKGTKKVPVVVVTR

KSTNKTKSPQKNCKCQMPEKCFQKIQMTLRKDDVKWEQ

>XP\_036624683.1/1-437 centrosomal protein CEP57L1 isoform X1 [Trichosurus vulpecula]XP\_036624684.1 centrosomal protein CEP57L1 isoform X1 [Trichosurus vulpecula]

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-----------------------------------------------MCAEFKHSMI----GSYRKPP----

-D-------KI-TNLSFAYCEAA-----PQDNLPKKLQH------------LSTPN-------SH-------

-------ALLLALKTLQDKIHLLELERTQAEDNLNTLSQEATLYKKALQNENNERDLAHQELIKQRKDISAQ

LSAAQTRCSILEKQLELTTKMVLNAEQEKNFALEQQ------------------------------------

------------QLQWEKGQDQMKLNAKLEKLEVLEKECVRLTTTQKTAEEKIKHLEQKLIEEEHQRKLIQD

SAAQLQTGLEINRILMSSVLPSQQTK----KKKSAK--------------------------EKKSSKREL-

-QTHSKFGA--------IG---K---------------------------------------ACPEVPERRA

ISK------RTVRC----RPISSYPNKSTPVGDGLTDLVMAMQDELDQMSIEHQE---LLKQVQESPRLSVN

EEIECELECLARKMEMKGEQICKLKKYQDHVN--KLQQKSQNSK--SEAFSIEPEDENHKGKKNVPVMVVTR

KGRNKTKLPLENCSCQMPQKCFQKIRMTLRKDDVKWEQ

>XP\_044530270.1/1-458 centrosomal protein CEP57L1 isoform X1 [Gracilinanus agilis]

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-----------------------------------------------MFADMKHSMI----GSYRKPP----

-D-------KI-TDPSFIYSGEA-----PWKHLSKKL-P------------FSTPN-------TP-------

-------ALLLALKTLQDKIQQLVIERAQAEENLSALSREAEQYKKALQDENNERDLAHQELIKQRKDISTQ

LLAAQTRCSILEKQLALTKKMVLNAEQEKNVALEQQ------------------------------------

------------Q---EKDQNQMKLNAKLEKLEVLEKECFRLTTTQKTAEEKIKYLEEKLIEEEHQRKLVQD

RAAQLQTGLEINRILMSSVLPSQLIK----RKKSTK--------------------------KIKCSKRGL-

QQTHSKFGA--------IG---K------SANVS-HSVNTSV-QTLLNLMKHGSSP---SLQGCPEATERRA

IGK------RTVRS----RPTSSYSS----VGDGLSDLLMAMQDELDQMSTEHEE---LLKQVQESPVLPVN

EDLECELSCLARKMEIKGEQIHKLKKYQDHVN--KLQQKSQNEK--SEASSIQPEDEDQKETKNVPVTVVTK

KGTNKTKPPQKNFSCQMPHKCVQKIQMTLRKDDVKWEQ

>XP\_007484469.1/1-459 centrosomal protein CEP57L1 isoform X1 [Monodelphis domestica]XP\_056674628.1 centrosomal protein CEP57L1 isoform X1 [Monodelphis domestica]

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-----------------------------------------------MYADLKHSVI----GSYRKPP----

-D-------KI-TDPSFIYCGEA-----PWKHPSNKL-P------------FSTPN-------TP-------

-------ALLLALKTLQDKIQQLVIERAQAEENLSALSQEAEQYKKALQDENNERDLAHQELIKQRKDISTQ

LLAAQTRCSILEKQLALTKKMVLNAEQEKNVALEQQ------------------------------------

------------Q---EKDQNQMKLNAKLEKLEVLEKECFRLTTTQKTAEEKIKYLEEKLLEEEHQRKLVQD

RAAQLQTGLEINRILMSSVLPSQLIK----RKKSAK--------------------------KIKCSKRGL-

QQTHSKFGA--------IG---K------SASVS-HSANTSV-QTLLNLMKHGSSP---SLQGCPEATERRA

ISK------RTVRC----RPTSSYSS----VGDGLSDLLMAMQDELDQMITEHEE---LLKQVQESPVLLVN

EDLECELGCLARKMEMKGEQIHKLKKYQEHVN--KLQQKSQNEK--SEASSIQPEDEDQKETKNVPVTVVTK

KGTNKTKPPQKNFSCQMPHKCFQKIQMTLRKDDVKWEQ

>XP\_035152352.2/1-610 centrosomal protein CEP57L1 isoform X1 [Callithrix jacchus]

MSRAILERRAGPWSWRGGGARGSKPALRPAPSVGISPEGGSRE-----GRRGPHPQPLPLLRPAQTRSRPGP

SA------------------FFPAQAE------------------ATRRGKAIGKSPAL--WQATSR-----

--------------PQVLRARQPTAPCCYACVTANE----------AHASLEALSLSP--------------

-------G-AVSVGGALESVLEKG--------------------------------------K-EKI-----

-----------------------------------------------MDSELMHSIV----GSYRKPP----

-E-------RV-FVPSFTKNESS------QNCH--PA-----NLEVTSSKIIHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNTLSKEAAQYKKALENETNERNLAHQELIKQKKDISVQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDEMKLYAKLEKLDVLEKECFRLTATQKTAEDKIKYLEERLKEEEHQRKLFQD

KASELQTGLEISKIIMSSVSNLKHSKE---KKKSSK--------------------------KTKCVKRGSP

RQVCSKFGALPFVAE-------K-------------------------MRQHRG-P--HILQKSSNETEPIC

LPK----PSRT-TS-WC-KAIPTDSEKSISICDNLSELLMAMQDELDQMSVEHQE---LLKQMKETESHSVF

NDIECELECLVKKMEIKGTQISKLKKHQDSVR--KLQQKVQNSKM-SKASGIQQEGSNPKGSRNIKNS--PR

KCLTDTNLFQK-NSSFHPIP-VHNLQVKLRRDDIMWEQ

>MBZ3879316.1/1-700 Centrosomal protein CEP57L1 [Sciurus carolinensis]

MS---------PFDISFQKIHSAAP-----------PNTKNSEMDFKLSLKDNLFYHMDSRNTFQLKSSPPP

PSQRGPSSSGNPRAPSRAKELAEPQGQRLRARPFVQLHRWDRPRGREQGGEMGSLAPSPSPFSARHK-----

--------------PGAAPAPAPSSPPKQTRPAKAK----------PLGKAPPSSRLPSD---PKS---AER

GRRPLPAT-THAQPRVACVRLQRPSVCAGKRFSFPGVRSSWTGVGEGKVRNRGLLGTWALAAATNWI-----

-----------------------------------------------MNSELIHSIV----GSYLKPP----

-E-------EV-FAPSFTQDES------SQNCH--TV-----NLEVTSPKMLHSPN-------NQ-------

-------ALILALKTLQEKIHHLELERTQAEDNLNILSREAAQYKKALENETNERNLAHQELIKQKKDISLQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQLRLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLKEEEHHRKLFQD

KASELQTGLEISKILMSSVSKSKLSKG---KKKSSK--------------------------KTKCFKRGPP

QQIYAKLRELPFEAE-------K------SAA---CPVNASM-HSLLKMMNHCS-Q--HSLQKP-EMTEPRC

LYR----PTRK-TS-QC-KAVSQDSEKSISICDNLSELLMAMQDELDHMSMEHEE---LLKQMKKTKSRSVC

DDIECELEHLVKKMEIKGEQISKLRKHQDNVR--KLQQKVQNSKM-SDTSGIQREDSNLKGSKNIKNS--PR

KCLNETNPFQK--NNFQPVQ-VRNLQMKLRRDDIMWEQ

>ETE69941.1/1-413 Centrosomal protein CEP57L1, partial [Ophiophagus hannah]

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--------LVAALKTLQEKIHRLEIERIQAENDLNCLSREAAQYRRALQQESNEKNRVHQELMEEKKDVSVP

LRAAQSRCSLLEKQLDYMRKMVLKAELEKNLVLEQQ------------------------------------

-----------THLQKEDDQNQMELCAKLEKLEVLEKQCWTLISTQKTAEEKIKHLEQKLLEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSPEKEVKKKSRKKKVLK--------------------------NNSTVKRT--

-QPSFQGGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-A--CMTSQCPEGTEK--

-----RTSRWTGIC----KPVS-CSTTS-SATETLSDLLLGMQDELGQMSFEHQE---LSKQIEESQNQDIR

EDLERELDCLVKQMEIKGEQISKLKKHQDHV--YKLKQRAQNLK--RNTAYSTSRPNELKGSKETVIS--P-

----SISSTNKTTNSLRLLKSAQKLQSVLKKDDIVWES

>XP\_015676799.2/1-457 centrosomal protein CEP57L1 isoform X1 [Protobothrops mucrosquamatus]XP\_015676800.1 centrosomal protein CEP57L1 isoform X1 [Protobothrops mucrosquamatus]

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------------------------------------------------------------------ME----

-------------------S---------------------------VDSESKHSYI----GSFLQPP----

-D-------KI--KSAFADLKPK------------SV------ISC-------PPN-------NQ-------

-------ALVAALKTLQEKICRLEIERIQAENDLNCLSREAAQYRKALQQESNEKNIVHPELMEERKDVSAQ

LRAAQSRCSLLEKQLDYMRKMVLKAELEKKLVLEQQ------------------------------------

-----------THLQKEDDQNQMELCAKLEKLEILEKQCWTLISTQKTAEEKIKHLEQKLLEEQHQRKLIQD

KAAQLQTGVEMNRILLSSLSPEKEVKKKSRKKKVIK--------------------------NNSSMKRT--

-QSSFQGGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-P--CMTSQCPEGTEK--

-----RTSRWPGIC----KPAS-CSTTS-SATESLSDLLLGMQDELGQMSFEHQE---LSKQIEESQNQDIR

EDLERELDCLVKQMEIKGEQISKLKKHQDHV--YKLKQRAQKLK--REPACSASRPNELKGSKETVIP--P-

----SISSTNKTTNSLRLLKSAQKIQSVLKKDDIVWES

>XP\_039207096.1/1-458 centrosomal protein CEP57L1 isoform X1 [Crotalus tigris]XP\_039207097.1 centrosomal protein CEP57L1 isoform X1 [Crotalus tigris]XP\_039207099.1 centrosomal protein CEP57L1 isoform X2 [Crotalus tigris]XP\_039207100.1 centrosomal protein CEP57L1 isoform X2 [Crotalus tigris]

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-----------------------------------------------------------------MME----

-------------------S---------------------------VDSESKHSYI----GSFLQPP----

-D-------KM--KSAFADLKPK------------GV------ISC-------PPN-------NQ-------

-------ALVAALKTLQEKICRLEMERIQAENDLNCLSREAAQYRKAFQQESNEKNIVHLELMEERKDVSAQ

LRAAQSRCSLLEKQLDYMRKMVLKAELEKKLVLEQQ------------------------------------

-----------THLQKEDDQNQMELCAKLEKLEVLEKQCWTLISTQKTAEEKIKHLEQKLLEEQHQRKLIQD

KAAQLQTGVEMNRILLSSLPPEKEVKKKSRKKKVVK--------------------------NNSSMKRT--

-QSSFQGGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-P--CMTSQCPEGTEK--

-----RTSRWPGIC----KPAS-CSTTS-SATETLSDLLLGMQDELGQMSFEHQE---LSKQIEESQNQDIR

EDLERELDCLVKQMEIKGEQISKLKKHQDHV--YKLKQRAQKLK--REPACSASRPNELKGSKETVIP--P-

----SISSTIKTTNSLRLLKSAQKIQSVLKKDDIVWES

>XP\_007434081.1/1-476 centrosomal protein CEP57L1 isoform X1 [Python bivittatus]

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---------------------------------------------------MALARGE--------------

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---------------------------------------------------------GELCPRSSIME----

-------------------S---------------------------VDTESKHSYI----GSFLQPP----

-D-------KI--KSAFADLRPK------------KV------NSC-------PPN-------NQ-------

-------ALVAALKTLQEKIHRLEVERTQAEDDLNCLSREAAQYRKALQHESNEKNVIHQELMEEKKDVSAQ

LRAARSRCSLLEKQLDYMRKMVLKAELEKNLVLEQQ------------------------------------

-----------THLQKEDDQNQMELCAKLEKLEVLEKQCWRLISTQKTAEEKMKQLEQKLQEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSPEKDVKKKSRKKKVIK--------------------------NNSGMRRTYG

SQPCLQGGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-P--CMTSQCPEGTEK--

-----RTSRWTGVC----KPMI-CSTSS-SATETLSDLLLGMQDELGQMSFEHQE---LSKQIEESQNQDIR

EDLERELDCLVKQMEIKGEQITKLKKHQDHV--YKLKQRAQKLK--RKPTSSASRPNELKGSKETAIP--P-

----STSSTNKTTSSLQLLKSAQKLQSVLKKDDIVWES

>XP\_026522435.1/1-472 centrosomal protein CEP57L1 isoform X2 [Notechis scutatus]

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---------------------------------------------------MASVGRE--------------

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---------------------------------------------------------VECCPRSYMME----

-------------------S---------------------------VDNESKHSYI----GSFLQPP----

-D-------KL--KS-FADLRPK------------RT------INC-------PPN-------NQ-------

-------ALVAALKTLQEKIHRLEIERIQAENDLNCLSREAAQYRRALEQESNEKNIVHQELMEEKKDVSVP

LRAAQSRCSLLEKQLDYMRKMMLKAELEKKLVLEQQ------------------------------------

-----------THLQKEDDQNQMELCAKLEKLEVLEKQCWTLISTQKTAEEKIKHLEQKLLEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSPEKEVKKKSRKKKVLK--------------------------NNSTVKRT--

-QPSFQGGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-A--CMTSQCPEGTEK--

-----RTSRWTGIC----KPVS-CSTTS-SATETLSDLLLYMQDELGQMNFEHQE---LSKQIEESQNQDIR

EDLERELDCLVKQMEIKGEQISKLKKHQDHV--YKLKQRAQNLK--RDTAYSTSRPNELKGSKETIIS--P-

----SISSTNKTTHSLRLLKSAQKLQSVLKKDDIVWES

>XP\_026582419.1/1-472 centrosomal protein CEP57L1 isoform X2 [Pseudonaja textilis]

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---------------------------------------------------MASVGRE--------------

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---------------------------------------------------------AECCPRSYMME----

-------------------S---------------------------LDNESKHSYI----GSFLQPP----

-D-------KL--KS-FADLRPK------------ST------INC-------PPN-------NQ-------

-------ALVAALKTLQEKIHRLEIERIQAENDLNCLSREAAQYRRALEQESNEKNIVHQELMEEKKDVSMP

LRAAQSRCSLLEKQLDYMRKMMLKAELEKKLVLEQQ------------------------------------

-----------THLQKKDDQNQMELCAKLEKLEVLEKQCWTLISTQKTAEEKIKHLEQKLLEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSPEKEVKKKSRKKKVLK--------------------------NNSTVKRT--

-QPSFQGGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-A--CMTSQCPEGPEK--

-----RTSRWTGIC----KPVS-RSTTS-SATETLSDLLLCMQDELGQMNFEHQE---LSKQIEESQNQDIR

EDLERELDCLVKQMEIKGQQISKLKKHQDHV--YKLKQRAQNLK--RDTAYSTSRPNELKGSKETIIS--P-

----SISSTNKTTNSLQLLKSAQKLQSVLKKDDIVWES

>KAG8123959.1/1-496 hypothetical protein E2320\_019559 [Naja naja]

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---------------------------------------------------MASVGGEEMTGSI--------

--------------------------------------------------------------GRPT-NLTER

HLWLPQGR-----------------------------------------------RDIECCPRSYMME----

-------------------S---------------------------VDNESKHSYI----GSFLQPP----

-D-------KL--KSAFADLRPK------------SV------INC-------PPN-------NQ-------

-------ALVAALKTLQEKIHRLEMERIQAENDLNCLSREAAQYRRALQQESNEKNIVHQELMEEKKDVSVP

LRAAQSRCSLLEKQLDYMRKMMLKAELEKKLVLEQQ------------------------------------

-----------THLQKEDDQNQVELCAKLEKLEVLEKQCWTLISTQKTAEEKIKHLEQKLLEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSP--EVKKKSRKKKVLK--------------------------NNSSVKRT--

-QPSFQGGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-A--CMASQCPEGTEK--

-----RTSRWTGIC----KPVS-CSTTP-CATETLSDLLLGMQDELGQMSFEHQE---LSKQIEESQNQDIR

EDLERELDCLVKQMEIKGEQISKLKKHQDHV--YKLKQRAQNLK--RETAYSTSRPNELKGSKETVIS--S-

----SISSTNKTTNSLRLLKSAQKLQSVLKKDDIVWES

>XP\_026522433.1/1-497 centrosomal protein CEP57L1 isoform X1 [Notechis scutatus]

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---------------------------------------------------MASVGREEMTGSI--------

--------------------------------------------------------------GRPT-NLTER

HLWLPQGR-----------------------------------------------KDIECCPRSYMME----

-------------------S---------------------------VDNESKHSYI----GSFLQPP----

-D-------KL--KS-FADLRPK------------RT------INC-------PPN-------NQ-------

-------ALVAALKTLQEKIHRLEIERIQAENDLNCLSREAAQYRRALEQESNEKNIVHQELMEEKKDVSVP

LRAAQSRCSLLEKQLDYMRKMMLKAELEKKLVLEQQ------------------------------------

-----------THLQKEDDQNQMELCAKLEKLEVLEKQCWTLISTQKTAEEKIKHLEQKLLEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSPEKEVKKKSRKKKVLK--------------------------NNSTVKRT--

-QPSFQGGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-A--CMTSQCPEGTEK--

-----RTSRWTGIC----KPVS-CSTTS-SATETLSDLLLYMQDELGQMNFEHQE---LSKQIEESQNQDIR

EDLERELDCLVKQMEIKGEQISKLKKHQDHV--YKLKQRAQNLK--RDTAYSTSRPNELKGSKETIIS--P-

----SISSTNKTTHSLRLLKSAQKLQSVLKKDDIVWES

>XP\_026582418.1/1-497 centrosomal protein CEP57L1 isoform X1 [Pseudonaja textilis]

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---------------------------------------------------MASVGREEMTGSI--------

--------------------------------------------------------------GRPT-NLTER

HLWLPQGR-----------------------------------------------RDTECCPRSYMME----

-------------------S---------------------------LDNESKHSYI----GSFLQPP----

-D-------KL--KS-FADLRPK------------ST------INC-------PPN-------NQ-------

-------ALVAALKTLQEKIHRLEIERIQAENDLNCLSREAAQYRRALEQESNEKNIVHQELMEEKKDVSMP

LRAAQSRCSLLEKQLDYMRKMMLKAELEKKLVLEQQ------------------------------------

-----------THLQKKDDQNQMELCAKLEKLEVLEKQCWTLISTQKTAEEKIKHLEQKLLEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSPEKEVKKKSRKKKVLK--------------------------NNSTVKRT--

-QPSFQGGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-A--CMTSQCPEGPEK--

-----RTSRWTGIC----KPVS-RSTTS-SATETLSDLLLCMQDELGQMNFEHQE---LSKQIEESQNQDIR

EDLERELDCLVKQMEIKGQQISKLKKHQDHV--YKLKQRAQNLK--RDTAYSTSRPNELKGSKETIIS--P-

----SISSTNKTTNSLQLLKSAQKLQSVLKKDDIVWES

>XP\_032072750.1/1-473 centrosomal protein CEP57L1 isoform X1 [Thamnophis elegans]

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---------------------------------------------------MASVRGE--------------

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---------------------------------------------------------VECCSRSYTME----

-------------------S---------------------------VDSESKHSYI----GSFLQPP----

-E-------RL--KSAFADLRPK------------SV------INF-------PPN-------NQ-------

-------ALVAALKTLQEKIHRLEIERIQAENDLNCLSREAAQYRRALQQESNEKHIVHQELMEEKKDVSVP

LRAAQSRCSLLEKQLDYMRKMVLKAEMEKKLVLEQQ------------------------------------

-----------THLQKEDDQNQMELCAKLEKLEVLEKQCWTLISTQKTAEEKIKHLEQKFLEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSPEKEVKKKSRKKKVIK--------------------------NNSTVKRT--

-QPSFQGGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-P--CMTSQCPEGTEK--

-----RTSRWTGLS----KPVP-CSTTS-CATEMLSDLLLGMQDELGQMSFEHQE---LSKQIKESQNQDIR

EDLERELDCLVKQMEIKGEQISKLKKHQDHV--YKLKQRAQKLK--RETAYSTSNPNELKGSKETVIA--P-

----SICSTNKTTNSLRLLKSAQKLQSVLKKDDIVWES

>XP\_013929138.1/1-473 PREDICTED: centrosomal protein CEP57L1 isoform X2 [Thamnophis sirtalis]

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---------------------------------------------------MASVRGE--------------

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---------------------------------------------------------VECCSRSYTME----

-------------------S---------------------------VDSESKHSYI----GSFLQPP----

-E-------RL--KSAFADLRPK------------SV------INF-------PPN-------NQ-------

-------ALVAALKTLQEKIHRLEIERIQAENDLNCLSREAAQYRRALQQESNEKHIVHQELMEEKKDVSVP

LRAAQSRCSLLEKQLDYMRKMVLKAEMEKKLVLEQQ------------------------------------

-----------THLQKEDDQNQMELCAKLEKLEVLEKQCWTLISTQKTAEEKIKHLEQKLLEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSPEKEVKKKSRKKKVIK--------------------------NNSTVKRT--

-QPSFQGGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-P--CMTSQCPEGTEK--

-----RTSRWTGLS----KPVP-CSTTS-CATEMLSDLLLGMQDELGQMSFEHQE---LSKQIKESQNQDIR

EDLERELDCLVKQMEIKGEQISKLKKHQDHV--YKLKQRAQKLK--RETAYSTSNPNELKGSKETVIA--P-

----SICSTNKTTNSLRLLKSAQKLQSVLKKDDIVWES

>XP\_013929137.1/1-480 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Thamnophis sirtalis]

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---------------------------------------------------MEQITGLFLFSFV--------

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--------------------------------------------------------LVECCSRSYTME----

-------------------S---------------------------VDSESKHSYI----GSFLQPP----

-E-------RL--KSAFADLRPK------------SV------INF-------PPN-------NQ-------

-------ALVAALKTLQEKIHRLEIERIQAENDLNCLSREAAQYRRALQQESNEKHIVHQELMEEKKDVSVP

LRAAQSRCSLLEKQLDYMRKMVLKAEMEKKLVLEQQ------------------------------------

-----------THLQKEDDQNQMELCAKLEKLEVLEKQCWTLISTQKTAEEKIKHLEQKLLEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSPEKEVKKKSRKKKVIK--------------------------NNSTVKRT--

-QPSFQGGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-P--CMTSQCPEGTEK--

-----RTSRWTGLS----KPVP-CSTTS-CATEMLSDLLLGMQDELGQMSFEHQE---LSKQIKESQNQDIR

EDLERELDCLVKQMEIKGEQISKLKKHQDHV--YKLKQRAQKLK--RETAYSTSNPNELKGSKETVIA--P-

----SICSTNKTTNSLRLLKSAQKLQSVLKKDDIVWES

>XP\_058030175.1/1-473 centrosomal protein CEP57L1 [Ahaetulla prasina]

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---------------------------------------------------MASIRGE--------------

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---------------------------------------------------------VECCSRSYTVE----

-------------------S---------------------------VDSESKHSYI----GSFLQPP----

-E-------RL--KSTFADLRPK------------SV------INF-------PPN-------NQ-------

-------ALVAALKTLQEKIHRLEIERIQAENDLNCLSKEAAQYRRALQQESNEKNIVHQELMEEKKDVSVP

LRAAQSRCSLLEKQLDYMRKMMLKAELEKKLVLEQQ------------------------------------

-----------THLRKEDDQNQMELCAKLEKLEVLEKQCWTLISTQKTAEEKIKHLEQKLLEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSPEKEVKKKSRKKKVIK--------------------------NNSSVKRT--

-EPSFQGGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKHRN-P--CMTSQCPEGTER--

-----RTSKWTGIC----KPVS-CSTTS-CTTETLSDLLLGMQDELGQMSFEHQE---LSKQIEESQNQDIR

EDLERELDYLVKQMEIKGEQISQLKKHQDHV--YKLKQRAQKLK--KEPAYSTSRPNELKRSKETVIT--S-

----SICSTNKTTNSLRLLKSAQKLQSVLKKDDIVWES

>XP\_034265023.1/1-474 centrosomal protein CEP57L1 isoform X1 [Pantherophis guttatus]

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---------------------------------------------------MASIRRE--------------

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---------------------------------------------------------VECCPRSYTME----

-------------------S---------------------------VDSESKHSYI----GSFLQPP----

-E-------RL--KSAFADLRPK------------SV------INF-------PPN-------NQ-------

-------ALVAALKTLQEKIHRLEIERIQAENDLNCLSREAAQYRRALQQESNKKNIVHQELMEEKKDVSVP

LRAAQSRCSLLEKQLDYMRKMVLKAELEKKLVLEQQ------------------------------------

-----------THLQKEDDQNQMELCAKLEKLEVLEKQCWTLISTQKTAEEKIKHLEQKLLEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSPEKEVKKKSRKKKVIK--------------------------NNSSLKRT--

-QPSFQGGMLPFVAG-------K------SASSS-HSVVANV-QTVLHMMKHRNSP--CMTSQCPQGTEK--

-----RTSRWTGIC----KPVS-YSTTS-CATETLSDLLLGMQDELGQMSFEHQE---LSKQIEESQNQDIR

EDLERELDCLVKQMEIKGEQISKLKKHQDHV--SKLKQRAQKLK--KEPAYSTSRPNELKGSKETVIS--P-

----SICSTNKTTNSLRLLKSAQKLQSVLKKDDIVWES

>XP\_034965165.1/1-465 centrosomal protein CEP57L1 [Zootoca vivipara]XP\_034965166.1 centrosomal protein CEP57L1 [Zootoca vivipara]

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------------------------------------------------------------------ME----

-------------------S---------------------------IDSESKHSYI----GSFIQPP----

-D-------NI--YSAFANIRSK------------EA------AAIAKD--TPAPN-------NQ-------

-------ALVAALKTLQEKIRRLELERSQAEENLNCLSREAAQYKKAFQHDSNEEDITHQGMMQEKKDVSMQ

LMAAQSRCSLLEKQLDYMRKMMINAELEKKLVLEQQ------------------------------------

-----------TQLQKEKDQNQLELCAKLDKLEILEKECWRLTSTQKTAEEKIRHLEQKLLEEQHQRKLIQD

KAAQLQTGLEMNRILMCSLSPREEANKKRRKKKAVK--------------------------KP-GLRKACS

SQPYLPTGTLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-Q--SAASPRPEGGEK--

-----RT----GMS----RLSS-CSTSS-SATEHLSDLLLIMQDELGQMNFEHQE---LLKQIQETQNQEVR

EDLERELDCLVKQMEAKGEQISKLRKHQENV--CRLKQKAKKLK--QKAANSASRPNGIKGAKETAAA--SR

ASVNSPCPVNKSTRSLQLLKSAQKLQSVLKKDDIVWEP

>XP\_053237614.1/1-466 centrosomal protein CEP57L1 isoform X1 [Podarcis raffonei]XP\_053237615.1 centrosomal protein CEP57L1 isoform X1 [Podarcis raffonei]

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------------------------------------------------------------------ME----

-------------------S---------------------------LDSESKNSYV----GSFLQPP----

-G-------NI--YSAFATLRSK------------EA------TAMAKD--TPAPN-------NQ-------

-------ALVAALKTLQEKIRRLELERSQAEENLNCLSREAAQYKKAFQHDSNEKDITHQGMMQEKKDVSMQ

LRAAQSRCSLLEKQLDYMRKMMVNAELEKKLVLEQQ------------------------------------

-----------MQLQKEKDQNQLELCAKLDKLEILEKECWRLTSTQKTAEDKIRHLEQKLLEEQHQRKLIQD

KAAQLQTGLEMNRILMCSLSPQKEANKKSRKKKAIK--------------------------KSSGLRKACG

SQSYLPAGTLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-Q--SAASQRPEGGEK--

-----RT----GMS----RPSS-CSTSS-SATEHLSDLLLIMQDELGQMNFEHQE---LLKQIQETQNQEVR

EDLERELDCLVKQMESKGEQISKLRKHQENV--YRLRQKAKKLK--QKAANSASRPNGLKGAKETSAT--SR

ASVNSACPMNKSTSSLQLLKSAQKLQSVLKKDDIVWEP

>XP\_028578961.1/1-466 centrosomal protein CEP57L1 isoform X1 [Podarcis muralis]XP\_028578962.1 centrosomal protein CEP57L1 isoform X1 [Podarcis muralis]XP\_028578964.1 centrosomal protein CEP57L1 isoform X1 [Podarcis muralis]

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------------------------------------------------------------------ME----

-------------------S---------------------------LDSESKNSYI----GSFLQPP----

-G-------NI--YSAFANVRSK------------EA------TAMAKD--TPAPN-------NQ-------

-------ALVAALKTLQEKIRRLELERSQAEENLNCLSREAAQYKKAFQHDANEKDITHQGMMEEKKDVSMQ

LRAAQSRCSLLEKQLDYMRKMMVNAELEKKLVLEQQ------------------------------------

-----------MQLQKEKDQNQLELCAKLDKLEILEKECWRLTSTQKTAEDKIRHLEQKLLEEQHQRKLIQD

KAAQLQTGLEMNRILMCSLSPQKEANKKSRKKKAVK--------------------------KPSGLRKACG

SQPYLPAGTLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-Q--SAASQRPEGGEK--

-----RT----GTS----RPSS-CSTSS-SATEHLSDLLLIMQDELGQMNFEHQE---LLKQIQETQNQEVR

EDLERELDCLVKQMESKGEQLSKLRKHQENV--YRLRQKARKLK--QKAANSASRPNRLKGAKETAAS--SR

ASVNSACPMNKSTSSLQLLKSAQKFQSVLKKDDIVWEP

>XP\_032999461.1/1-466 centrosomal protein CEP57L1 [Lacerta agilis]XP\_032999462.1 centrosomal protein CEP57L1 [Lacerta agilis]

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------------------------------------------------------------------ME----

-------------------S---------------------------IDSESKHSYI----GSFLQPP----

-D-------NI--YSAFANIRSK------------EA------AAIQKD--TPAPN-------NQ-------

-------ALVAALKTLQEKIRRLELERSQAEENLNCLSREAAQYKKAFQHDSNEKDITHQGMMQEKKDVSMQ

LSAAQSRCSLLEKQLDYMRKMMVNAELEKKLVLEQQ------------------------------------

-----------MQLQKEKDQNQLELCAKLDKLEILEEQCWRLTSTQKTAEEKIRHLEHKLLEEQHQRKLIQD

KAAQLQTGLEMNRILMCSLSPQKEANKKSRKKKAIK--------------------------KPSGLRKACC

SQPYLPAGTLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-Q--SAASQRPEGAEK--

-----RT----GMS----RPSS-CSTSS-SATEHLSDLLLIMQDELGQMNFEHQE---LLKQIQETQNQEVR

EDLERELDGLVKQMEAKGEQISKLRKHQENV--YRLRQKAKKLK--QKAANSASRPNGLKGAKETAAA--SR

ASVNSTCPVNKSTSSLQLLKSVQKLQSVLKKDDIVWEP

>XP\_061479553.1/1-469 centrosomal protein CEP57L1 isoform X1 [Rhineura floridana]XP\_061479554.1 centrosomal protein CEP57L1 isoform X1 [Rhineura floridana]

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------------------------------------------------------------------ME----

-------------------S---------------------------VDTESKHSYI----GSFLQPP----

-D-------KM--HSAFADFRSK------------EA------TAITKD--TIAPN-------NQ-------

-------ALAAALKTLQEKIHRLELERSQAEDDLNCLSREAAQYKKVLQHESDEKDITRQELMQERKDVSMQ

LRAAQSRCSLLEKQLDYMRKMMVSAELEKKLVLEQQ------------------------------------

-----------TQLEKEKDQNQLELCIKLDKLEILEKECWRLIRTQKTAEEKIKHLEQKLQEEQHQRKLIQD

KAAQLQTGLEMNRILMSSLSPQKDAKKKSRKKKAIK--------------------------KNSDLRKTCG

SQPHLPAGTLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-P--CAPSQHPERAEK--

-----RTSRWSGMS----GRAS-CST-S-SATENLSDLLLVMQDELGQMSFEHQE---LLKQIQETQNHEVW

EDLERELDCLVKQMEIKGEQISKLRKHQENV--YRLRQRAQKLK--RKAANAASRPDELKGTTETPVP--PR

VSVNSACSVNKSISSLRLLKNAQKLQLVLKKDDIVWES

>XP\_054836807.1/1-469 centrosomal protein CEP57L1 isoform X2 [Eublepharis macularius]

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------------------------------------------------------------------ME----

-------------------S---------------------------VDIESKHSYI----GSYIQPP----

-Q-------KI--PTPFGDLWPK------------KT------AAVATD--TPAPN-------SQ-------

-------ALVSALKSLQEKIHRLELERSQAEDDLNCLSREAAQYKKTLLHESNEKDIANQELMQERKDVSVQ

LSAAQYRCSLLEKQLDYMRKMVTSAEMEKKLVLEKQ------------------------------------

-----------TQLQKEKDQNQVELCAKLDKLEILEKECWRLTGTQKAAEEKIKHLEVKLQEEQHHRKLIQD

KAAQLQTGLEMNRILMSSLSPQKEAKKKSRKKKAVK--------------------------KNTSLWKEYS

SQQYLPTEALPFVAG-------K------STSSS-HSIVANV-QSILHMMKSRG-P--HVTPQCPEGAEK--

-----RVSRWTDVC----RSGSSCST-S-SAAENLSDLLLLMQDELGQMSFEHQE---LLKQIQETKNHEVR

EDLERELDCLVKQMEIKGEQITKLKRHQENV--YKLKQKAQKLK--RKAANV-SKPDDLKVTKEVTVP--PT

SSVYGTCSVNKSTNSLQLLRSAQKIQSVLKKDDILWEP

>XP\_054836798.1/1-483 centrosomal protein CEP57L1 isoform X1 [Eublepharis macularius]

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---------------------------------------------------MFMMGGR--------------

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-----------------------------------------------------------CYDLWNPTT----

-------------------S---------------------------VDIESKHSYI----GSYIQPP----

-Q-------KI--PTPFGDLWPK------------KT------AAVATD--TPAPN-------SQ-------

-------ALVSALKSLQEKIHRLELERSQAEDDLNCLSREAAQYKKTLLHESNEKDIANQELMQERKDVSVQ

LSAAQYRCSLLEKQLDYMRKMVTSAEMEKKLVLEKQ------------------------------------

-----------TQLQKEKDQNQVELCAKLDKLEILEKECWRLTGTQKAAEEKIKHLEVKLQEEQHHRKLIQD

KAAQLQTGLEMNRILMSSLSPQKEAKKKSRKKKAVK--------------------------KNTSLWKEYS

SQQYLPTEALPFVAG-------K------STSSS-HSIVANV-QSILHMMKSRG-P--HVTPQCPEGAEK--

-----RVSRWTDVC----RSGSSCST-S-SAAENLSDLLLLMQDELGQMSFEHQE---LLKQIQETKNHEVR

EDLERELDCLVKQMEIKGEQITKLKRHQENV--YKLKQKAQKLK--RKAANV-SKPDDLKVTKEVTVP--PT

SSVYGTCSVNKSTNSLQLLRSAQKIQSVLKKDDILWEP

>XP\_060093951.1/1-470 centrosomal protein CEP57L1 isoform X2 [Heteronotia binoei]XP\_060093960.1 centrosomal protein CEP57L1 isoform X2 [Heteronotia binoei]XP\_060093968.1 centrosomal protein CEP57L1 isoform X2 [Heteronotia binoei]

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------------------------------------------------------------------ME----

-------------------S---------------------------LDIESKHSYI----GSFIQPP----

-H-------KI--SIPFADLWPK------------KT------TAVTAD--TPAPN-------SQ-------

-------ALLSALKSLQEKIHRLELERSQAEDDLNCLSREAAQYKKTLQHESNEKDIVHQKLMQDRKDVSVQ

LSAAQSRCSLLEKQLDYMRKMVTSAELEKKLVVEQQ------------------------------------

-----------SQLQKEKDQNQAEICAKLDKLEILEKECWRLTGTQKAAEEKIKHLEARLQEEQHHRKLIQD

KAAQLQTGLEMNRILMTSLSPQKEAKKKSGKKKAVK--------------------------KNSSLKKECS

SQPHLAAGALPFVAG-------K------SASSS-HSVAANV-QSVLHMMKSRG-P--HLIPQGPEGAEK--

-----RISRWTGVC----RSGSFCST-S-SATDNLSDLLLIMQDELGQMSFEHQE---LLKQIQETKNHEVR

EDLERELECLVKQMEIKGEQITKLKRHQESV--YKLKQKAQKLK--RKAANVTSKPDDCKGTKEVTVP--PR

SSVHGTCSVNKSTNSLQLLRSAQKIQSVLKKDDILWEP

>XP\_060093943.1/1-479 centrosomal protein CEP57L1 isoform X1 [Heteronotia binoei]

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----------------------------------------------------------------MTLENS--

LGE--------------HCS---------------------------LDIESKHSYI----GSFIQPP----

-H-------KI--SIPFADLWPK------------KT------TAVTAD--TPAPN-------SQ-------

-------ALLSALKSLQEKIHRLELERSQAEDDLNCLSREAAQYKKTLQHESNEKDIVHQKLMQDRKDVSVQ

LSAAQSRCSLLEKQLDYMRKMVTSAELEKKLVVEQQ------------------------------------

-----------SQLQKEKDQNQAEICAKLDKLEILEKECWRLTGTQKAAEEKIKHLEARLQEEQHHRKLIQD

KAAQLQTGLEMNRILMTSLSPQKEAKKKSGKKKAVK--------------------------KNSSLKKECS

SQPHLAAGALPFVAG-------K------SASSS-HSVAANV-QSVLHMMKSRG-P--HLIPQGPEGAEK--

-----RISRWTGVC----RSGSFCST-S-SATDNLSDLLLIMQDELGQMSFEHQE---LLKQIQETKNHEVR

EDLERELECLVKQMEIKGEQITKLKRHQESV--YKLKQKAQKLK--RKAANVTSKPDDCKGTKEVTVP--PR

SSVHGTCSVNKSTNSLQLLRSAQKIQSVLKKDDILWEP

>XP\_056712367.1/1-471 centrosomal protein CEP57L1 [Euleptes europaea]

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------------------------------------------------------------------ME----

-------------------S---------------------------VDTESKHSYI----GSFIQPP----

-H-------KI--PVPFADLWPK------------TT------AAFAAD--TPAPN-------SQ-------

-------ALVSALKSLQEKIHRLELERSHAEHDLNCLSREAAQYKKTLQCESNEKDTAHQELMQERKDVSVQ

LSAAQSCCSLLEKQLDYMRKMVVSAELEKKLVLEQQ------------------------------------

-----------IQLQKEKDQNQVEICAKLDKLEILEQECWRLTGTQKAAEGKIKHLEAKLQEEQHHRKLIQD

KAAQLQTGLEMNRILMSSLSPQNEAKKKSGKKKAVK--------------------------KNHSLRKECS

SQPYLPAGGLPFVAG-------K------SASSS-HSVVANV-QSILHLVKSRG-A--DVIPQGSEGAEK--

-----RTSRWTGVC----RSGSSYSTSS-SATDNLSDLLLVMQDELGQMSFEHQE---LLKQIQETKSQEVR

EDLERELECLVKQMEIKAEQITKLKRHQDSV--YKLKQKARKLK--RKAANFTSKPDDFKGTKEAAVP--PR

GIVHGTCSVNKTTNSLQLLKKAQKIQSVLKQDDILWEP

>XP\_048349085.1/1-471 centrosomal protein CEP57L1 isoform X2 [Sphaerodactylus townsendi]XP\_048349096.1 centrosomal protein CEP57L1 isoform X2 [Sphaerodactylus townsendi]XP\_048349105.1 centrosomal protein CEP57L1 isoform X2 [Sphaerodactylus townsendi]XP\_048349113.1 centrosomal protein CEP57L1 isoform X2 [Sphaerodactylus townsendi]

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------------------------------------------------------------------ME----

-------------------S---------------------------VDTESNYSYI----GSFVQPP----

-H-------KI--SIPFAELWPK------------KT------TAVAAD--TPAPN-------SQ-------

-------ALVSALKSLQEKIHRLELERSQAEADLNCLSREAALYKKTLQHESNEEETAHQELMQERKDVSVQ

LSAAQSRCSLLEKQLDYMRKMMIDAELEKKLVLEQQ------------------------------------

-----------THLQKEKDQNQIEICAKLDKLEILEQECRRLTGTQKGAEEKIKRLEAKLQEEQHHRKLIQD

KAAQLQTGLEMNRILMHSLSPQKEEKKKSQKKKAVK--------------------------KNPSLRKECS

SQPYLPAGALPFVAG-------K------SASSS-HSVAANV-QSVLHMMKSRG-R--YVIPQDQEAAEK--

-----NPSRWTGVC----RSGSAYSASS-SATDNLTELLLLMQDELGQMSFEHQD---LLKQIQETKSYEVR

EDLERELECLVKQMEIKGEQITKLKRHQDSI--YKLKQKAQKLK--RKPANVTSKPDYCRETQEATDP--PR

SSVYGTCSVNKTTNSLQLLKSAQKIQSVLKKDDILWEP

>KAJ6660260.1/1-470 hypothetical protein lerEdw1\_017960 [Lerista edwardsae]

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------------------------------------------------------------------ME----

-------------------S---------------------------LDMESKNSYV----GSFLQPP----

-D-------KI--PSALADFWSK------------KA------TAATID--TSGPN-------NQ-------

-------ALVSALKTLQEKIHRLELERSQAEDDLNCLSREAAQYKKALQHESKKEDVNHLELMQERKDVSMQ

LGAAQSRCSLLEKQLDYMRKMVVSAELEKRLVLEKQ------------------------------------

-----------TQLQKEKDQSQVELCAKLDKLEILEKECWRLTDTQKAAEEKIKHLEAKLIEEQHQRKLIQD

KAAQLQTGLEMNRILVSSLSPQKDAKKKSRKKKVIK--------------------------KTSVSRKVCD

TQPSLQPGTLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-P--QVTLHHSEAAEQ--

-----RTSRWTDVC----RPGS-CSTSS-SISENLSDILLALQDELGQMSFEHQE---LLKQIQETQNPDAQ

EDLERELDCLVKQMEVKGEQISKLKKHQENV--YKLRQKAQKLK--RKAANAASRPAKFEEAKETTVL--PR

GSVHGTCSVNKSTNSLQLLKTAQRLQLVLKKDDIVWEP

>XP\_020656986.1/1-470 centrosomal protein CEP57L1 [Pogona vitticeps]

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------------------------------------------------------------------ME----

-------------------S---------------------------VDTDSKHSYI----GSFLQPP----

-D-------NI--CSAFADLRSK------------KR------PAIPTD--APVPN-------NK-------

-------ALVAALKTLQEKIHRLELERSQAEDNLNSLSSEAAQYKKALQHESNAKDATHQELLQQRKDVSMQ

LETAQSRCSLLEKQLDYMRKMVVSAELEKKLVLEQQ------------------------------------

-----------TQLQKEKEQNHVELCVKLDKLEILEKECERLTITQKTAEEKIKCLEHKLQEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSPPKDTKKKSKKKKAGK--------------------------KNPGLIKTYD

SQPCLQTGKLPFVAG-------M------SASSS-HSVVANV-QSVLHMMKNRG-L--CATAQCPEGADK--

-----RISRRTGAC----RPVS-SSTSS-SATENLSDLLLIMQNELGQMNLEHQE---LLKQIEETENQDVQ

EDLERELDCLVKQMEIKGEQISKLRKHQEHV--YKLTQKAQKLK--RKVAKTTSRSEELKGIKEPTIS--PK

SSVHSICSMSRSKNSLELLKSAQKLQSVLKKDDIVWES

>XP\_060609127.1/1-475 centrosomal protein CEP57L1 isoform X1 [Anolis sagrei ordinatus]XP\_060609128.1 centrosomal protein CEP57L1 isoform X1 [Anolis sagrei ordinatus]

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------------------------------------------------------------------MEVSNT

TSA--------------DQS---------------------------FDSASKHSYI----GSFLQPP----

-V-------NI--RS---GFELK------------KK------T-IPTD--IPAPN-------NQ-------

-------ALVTALRTLQEKIHRLELERSQAEDDLNALSREAAQYKRALQHESNEKDKTHGEMMQERKGVSMQ

LGAAQTRCSLLEKQLEYMRRMVVSAELEKRQVLEQQ------------------------------------

-----------IQLQKEKDQDQVELCAKLDKLEILEKECWRLTSTQKTAEEKIKYLEQKLQEEQHQRKLIQD

KAAQLQTGLEMNRILLSSLSPQKDTKKKSRKKKGVK--------------------------NNTDLTKTHG

SHPSQQTGVLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-P--CVTSHYPEQSEK--

-----RPSRRAALG----RPSS-CNTSS-SATDSLSDLLLVMQDELGQMSFEHQE---LLKQIQETQEQDMR

EDLERELDCLVKQMEIKGEQISKLKKHQEHV--FKLRRSAQKLK--RKVANAASNSEELTGTKETAVV--SR

LGARSSCPVNRSTSSLQLLKCAQKLQSVLKKDDIVWEP

>XP\_008119127.1/1-495 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Anolis carolinensis]

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---------------------------------------------------MGVPPSLG---NV--------

--------------------------------------------------------------QRSI-NIG--

---LL---------------------------------------------------QGEWGTGSSVME----

-------------------S---------------------------FDSASKHSYI----GSFLQPP----

-V-------NI--RS---GLELK------------KK------T-IPKD--IPAPN-------NQ-------

-------ALVTALRTLQEKIHRLELERSQAEDDLNALSREAAQYKRAMQHESNEKDKTHGKVMQERKDVSIQ

LGAAQTRCSLLEKQLDYMRRMVVSAELEKKQVLEQQ------------------------------------

-----------IQLQKEKDQDQVELCAKLDKLEILEKECWRLTSTQKTAEEKIKHLEQKLQEEQHQRKLIQD

KAAQLQTGLEMNRILLSSISPQKDTKKKCKKKKVVK--------------------------NNPDSPKTHG

SQPSPQTGVLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-P--CVTSHYSEQAEK--

-----RVSRRAVLG----RPSS-CTTSS-SATDSLSDLLLVMQDELGQMSFEHQE---LLKQIQETQDQDMR

EDLERELDCLVKHMEIKGEQISKLKKHQEHV--FKMRRSAQKLK--RKVANAASNSDELKGTKKTAVT--LR

LGARSSCSVNRNTSSLQLLKCAQKLQSVLKKDDIVWEP

>XP\_016853400.1/1-490 PREDICTED: centrosomal protein CEP57L1 isoform X3 [Anolis carolinensis]

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---------------------------------------------------MAF------------------

----------------------------------------------------------------FI-ESG--

---LLGHT-----------------------------------------------NTGEWGTGSSVME----

-------------------S---------------------------FDSASKHSYI----GSFLQPP----

-V-------NI--RS---GLELK------------KK------T-IPKD--IPAPN-------NQ-------

-------ALVTALRTLQEKIHRLELERSQAEDDLNALSREAAQYKRAMQHESNEKDKTHGKVMQERKDVSIQ

LGAAQTRCSLLEKQLDYMRRMVVSAELEKKQVLEQQ------------------------------------

-----------IQLQKEKDQDQVELCAKLDKLEILEKECWRLTSTQKTAEEKIKHLEQKLQEEQHQRKLIQD

KAAQLQTGLEMNRILLSSISPQKDTKKKCKKKKVVK--------------------------NNPDSPKTHG

SQPSPQTGVLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-P--CVTSHYSEQAEK--

-----RVSRRAVLG----RPSS-CTTSS-SATDSLSDLLLVMQDELGQMSFEHQE---LLKQIQETQDQDMR

EDLERELDCLVKHMEIKGEQISKLKKHQEHV--FKMRRSAQKLK--RKVANAASNSDELKGTKKTAVT--LR

LGARSSCSVNRNTSSLQLLKCAQKLQSVLKKDDIVWEP

>XP\_008119133.1/1-490 PREDICTED: centrosomal protein CEP57L1 isoform X2 [Anolis carolinensis]XP\_008119141.1 PREDICTED: centrosomal protein CEP57L1 isoform X2 [Anolis carolinensis]XP\_008119146.1 PREDICTED: centrosomal protein CEP57L1 isoform X2 [Anolis carolinensis]

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---------------------------------------------------MADLPRYRFDCN---------

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-------R-----------------------------------------------HYGEWGTGSSVME----

-------------------S---------------------------FDSASKHSYI----GSFLQPP----

-V-------NI--RS---GLELK------------KK------T-IPKD--IPAPN-------NQ-------

-------ALVTALRTLQEKIHRLELERSQAEDDLNALSREAAQYKRAMQHESNEKDKTHGKVMQERKDVSIQ

LGAAQTRCSLLEKQLDYMRRMVVSAELEKKQVLEQQ------------------------------------

-----------IQLQKEKDQDQVELCAKLDKLEILEKECWRLTSTQKTAEEKIKHLEQKLQEEQHQRKLIQD

KAAQLQTGLEMNRILLSSISPQKDTKKKCKKKKVVK--------------------------NNPDSPKTHG

SQPSPQTGVLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-P--CVTSHYSEQAEK--

-----RVSRRAVLG----RPSS-CTTSS-SATDSLSDLLLVMQDELGQMSFEHQE---LLKQIQETQDQDMR

EDLERELDCLVKHMEIKGEQISKLKKHQEHV--FKMRRSAQKLK--RKVANAASNSDELKGTKKTAVT--LR

LGARSSCSVNRNTSSLQLLKCAQKLQSVLKKDDIVWEP

>XP\_042301699.1/1-467 centrosomal protein CEP57L1 isoform X1 [Sceloporus undulatus]XP\_042301700.1 centrosomal protein CEP57L1 isoform X1 [Sceloporus undulatus]

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------------------------------------------------------------------ME----

-------------------S---------------------------FDNESKHSYI----GSFLLPP----

-G-------KI--GS---DLGPK------------KK------TAIPAD--TPAPN-------NQ-------

-------ALVAALRTLQEKIHRLELERSQAEDDLNALSKEAAQYKRTLQHESNEKDISHEEMTQERKDVSMQ

LGAAQTRCSLLEKQLDYMRRMVISAQLEKKQVLEQQ------------------------------------

-----------IQLQKEKDQDQVELCAKLEKLEILEKECWRLTSTQKTAEEKIKCLEQKLQEEQHQRKLIQD

KAAQLQTGLEMNRILLSSFSPQKDMKKKSKKKKVVK--------------------------KNPDLKKTHG

SPPPQSTGMLPFVAG-------K------SASSS-HSVVANV-QSVLHMMKYRS-P--CVTSLYPEGTEN--

-----RTSRRAALS----RSVS-CTTSS-STTDSLSDLLLIMQDELGQMSFEHQE---LLKQIQETQDQDIR

EDLERELDCLVKQMEVKGEQISKLKKHQEHV--YKMRQRAQKLK--RKVASAAPNLDELKGTKETAVT--PR

HGVRSTCCANRSTSSLQLLKCAQKLQSVLKKDDIVWEQ

>EMP38037.1/1-500 Centrosomal protein CEP57L1 [Chelonia mydas]

-------------------------------------------------------MLLSAKG-------PRP

PLTM-----------------------------------------AAPGREPADTQTFLTFQKA--------

--------------------------------------------------------------SCTV-SALIG

KCKLLW---------------------------------------------------------GEIEEGQ--

-------------------T---------------------------MGSESKQSFI----GSFLQPP----

-D-------KM-FVPTFGQSKSK------------KA------TATTGDM-LPAPN-------NQ-------

-------ALMSALKTLQEKIRRLELERSQAEDNLSCLSIEAAQYKKTLQHETNEKDIAHEELIQQKKDVSVQ

LSAAQSHCSLLEKQLDYMRKMVFNAELEKNMVLQQQ------------------------------------

-----------TQLQKEKDQNQMELHAKLEKLEVLEKECFRLSTTQRTAEDKIKQLEEKLREEEHHRKLTQD

KAAQLQTGLEINRILMSSVSPQNERKKKNRKKKTA-------------------------------------

----------------------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CILSRCPEAAEH--

-----RISRRTIAC----KSVSSCSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKAQKLK--RQSAHVLPKSDDLKGTREIPVT--SS

GRASKSCPVQKSKSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_039388685.1/1-472 centrosomal protein CEP57L1 isoform X2 [Mauremys reevesii]

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--------------------------------------------------------------------ME--

-------------------T---------------------------MGSESKQSFI----GSFLQPP----

-D-------RM-SVPTFGQSKSK------------KV------TTTTGDM-LPAPN-------NQ-------

-------ALMSALKTLQEKIRRLELERSQAEDNLSCLSIEAAQYKKTLQHETNVKDIAHEELIQQKKDVSVQ

LSAAQSRCSLLEKQLDYMRKIVFNAELEKNMVLEQQ------------------------------------

-----------IPLQKEKDQNHMELHAKLEKLEVLEKECFRLSTTQRTAEDKIKQLEEKLCEEEHQRKLIQD

KAAQLQTGLEINRILTSSVSSQNEPTKKSRKKKTAK--------------------------KKSALKKVHP

PQFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CVLSRCVEADEH--

-----RISRRTIAC----KSASSCSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKTQKLK--RQSA-VLPKSDDLKGTREIPVT--PS

RSASKNCPVQKSKSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_044867557.1/1-476 centrosomal protein CEP57L1 isoform X2 [Mauremys mutica]

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-----------------------------------------------------------MV-----------

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------------------------------------------------------------------GKLV--

-------------------T---------------------------MGSESKQSFI----GSFLQPP----

-D-------RM-FVPTFGQSKSK------------KV------TTTTGDM-LPAPN-------NQ-------

-------ALMSALKTLQEKIRRLELERSHAEDNLSCLSIEAAQYKKTLQHETNAKDIAHEELMQQKKDVSVQ

LSAAQSRCSLLEKQLDYMRKIVFNAELEKNMVLEQQ------------------------------------

-----------IPLQKEKDQNHMELHAKLEKLEVLEKECFRLSTTQRTAEDKIKQLEEKLREEEHQRKLIQD

KAAQLQTGLEINRILTSSVSSQNEPTKKSRKKKTAK--------------------------KKSALKKVHP

PQFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CVLSRCVEADEH--

-----RISRRTIAC----KSASSCSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKTQKLK--RQSA-VLPKSDDLKGTREIPVT--PS

RSASKNCPVQKSKSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_030411938.1/1-470 centrosomal protein CEP57L1 [Gopherus evgoodei]XP\_030411939.1 centrosomal protein CEP57L1 [Gopherus evgoodei]

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-----------------------------------------------MGSESKQSFI----GSFLQPP----

-D-------RM-FVPTFGQSKSK------------KV------TATTGDM-LPASN-------SQ-------

-------ALMSALKTLQEKIRRLELERSQAEDNLSCLSIEAAQYKKTLQLETNVKDIAHEELIQQKKDVSVQ

LSAAQSRCSLLEKQLDYMRKIVFNAELEKNMVLEQQ------------------------------------

-----------TPLQKEKDQNHMELHAKLEKLEILEKECFRLSNTQRTAEDKIKQLEEKLREEEHQRKLIQD

KAAQLQTGLEINRMLTSSVSSQNEPTKKSRKKKIAK--------------------------KKSALKKVHP

PQFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHIMKHRS-P--CVLSRCVEADEH--

-----RISRRTTAC----KSASSCSTSS-SVTDNLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKAQKLK--RQSAHVLLKSDDLKGTREIPVT--PS

RSASKNCPVQKSKSSLQLLKNVQKLQSTLKKDDITWEQ

>XP\_043398695.1/1-485 centrosomal protein CEP57L1 isoform X1 [Chelonia mydas]

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---------------------------------------------------MADNTLFLLF-----------

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------------------------------------------------------------------GEEK--

-------------------T---------------------------MGSESKQSFI----GSFLQPP----

-D-------KM-FVPTFGQSKSK------------KA------TATTGDM-LPAPN-------NQ-------

-------ALMSALKTLQEKIRRLELERSQAEDNLSCLSIEAAQYKKTLQHETNEKDIAHEELIQQKKDVSVQ

LSAAQSRCSLLEKQLDYMRKMVFNAELEKNMVLQQQ------------------------------------

-----------TQLQKEKDQNQMELHAKLEKLEVLEKECFRLSTTQRTAEDKIKQLEEKLREEEHHRKLIQD

KAAQLQTGLEINRILMSSVSPQNERKKKNRKKKTAK--------------------------KKSALKKVHP

PQLCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CILSRCPEAAEH--

-----RISRRTIAC----KSVSSCSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKAQKLK--RQSAHVLPKSDDLKGTREIPVT--SS

GRASKSCPVQKSKSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_044867553.1/1-484 centrosomal protein CEP57L1 isoform X1 [Mauremys mutica]XP\_044867554.1 centrosomal protein CEP57L1 isoform X1 [Mauremys mutica]XP\_044867555.1 centrosomal protein CEP57L1 isoform X1 [Mauremys mutica]XP\_044867556.1 centrosomal protein CEP57L1 isoform X1 [Mauremys mutica]KAH1173696.1 hypothetical protein KIL84\_017535 [Mauremys mutica]

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---------------------------------------------------MADNTLFLQL-----------

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------------------------------------------------------------------REEK--

-------------------T---------------------------MGSESKQSFI----GSFLQPP----

-D-------RM-FVPTFGQSKSK------------KV------TTTTGDM-LPAPN-------NQ-------

-------ALMSALKTLQEKIRRLELERSHAEDNLSCLSIEAAQYKKTLQHETNAKDIAHEELMQQKKDVSVQ

LSAAQSRCSLLEKQLDYMRKIVFNAELEKNMVLEQQ------------------------------------

-----------IPLQKEKDQNHMELHAKLEKLEVLEKECFRLSTTQRTAEDKIKQLEEKLREEEHQRKLIQD

KAAQLQTGLEINRILTSSVSSQNEPTKKSRKKKTAK--------------------------KKSALKKVHP

PQFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CVLSRCVEADEH--

-----RISRRTIAC----KSASSCSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKTQKLK--RQSA-VLPKSDDLKGTREIPVT--PS

RSASKNCPVQKSKSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_039388683.1/1-484 centrosomal protein CEP57L1 isoform X1 [Mauremys reevesii]XP\_039388684.1 centrosomal protein CEP57L1 isoform X1 [Mauremys reevesii]

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---------------------------------------------------MADNTLFLQL-----------

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------------------------------------------------------------------REEK--

-------------------T---------------------------MGSESKQSFI----GSFLQPP----

-D-------RM-SVPTFGQSKSK------------KV------TTTTGDM-LPAPN-------NQ-------

-------ALMSALKTLQEKIRRLELERSQAEDNLSCLSIEAAQYKKTLQHETNVKDIAHEELIQQKKDVSVQ

LSAAQSRCSLLEKQLDYMRKIVFNAELEKNMVLEQQ------------------------------------

-----------IPLQKEKDQNHMELHAKLEKLEVLEKECFRLSTTQRTAEDKIKQLEEKLCEEEHQRKLIQD

KAAQLQTGLEINRILTSSVSSQNEPTKKSRKKKTAK--------------------------KKSALKKVHP

PQFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CVLSRCVEADEH--

-----RISRRTIAC----KSASSCSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKTQKLK--RQSA-VLPKSDDLKGTREIPVT--PS

RSASKNCPVQKSKSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_050807359.1/1-485 centrosomal protein CEP57L1 isoform X1 [Gopherus flavomarginatus]

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---------------------------------------------------MADNTLFLQL-----------

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------------------------------------------------------------------PEEK--

-------------------T---------------------------MGSESKQSFI----GSFLQPP----

-D-------RM-FVPTFGQSKSK------------KV------TATTGDM-LPASN-------NQ-------

-------ALMSALKTLQEKIRRLELERSQAEDNLSCLSIEAAQYKKTLQLETNVKDIAHEELIQQKKDVSVQ

LSAAQSRCSLLEKQLDYMRKIVFNAELEKNMVLEQQ------------------------------------

-----------TPLQKEKDQNHMELHAKLEKLEVLEKECFRLSTTQRTAEDKIKQLEEKLREEEHQRKLIQD

KAAQLQTGLEINRMLASSVSSQNEPTKKSRKKKIAK--------------------------KKSALKKVHP

PQFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CVLSRCVEADEH--

-----RISRRTTAC----KSASSCSTSS-SVTDNLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKAQKLK--RQSAHVLPKSDDLKGTREIPVT--PS

RSASKNCPVQKSKSSLQLLKNVQKLQSTLKKDDITWEQ

>TFK14359.1/1-486 intraflagellar transport protein 81-like protein [Platysternon megacephalum]

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---------------------------------------------------MADNTFFLRL-----------

------------------------------------------------------------------------

------------------------------------------------------------------QEEK--

-------------------T---------------------------MGSESKQSFI----GSFLQPP----

-D-------RM-FVPTFGQSKSK------------KV-----IIATTGDM-LPAPN-------NQ-------

-------ALMSALKTLQEKIRHLELERSQAEDNLSCLSIEAAQYKKTLQHETNAKDIAHEELIQQKKDVSVQ

LSAAQSHCSLLEKQLDYMRKMVFNAELEKNMVLEQQ------------------------------------

-----------TRLQKEKDQNHMELHAKLEKLEVLEKECFKLSTTQRTAEDKIKQLEEKLREEEHQRKLIQD

KAAQLQTGLEINRILTSSVSSQNEPKKKSRKKKTTK--------------------------KKSALKKVHP

PQFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CVLSQCPEAAEH--

-----RISRRSIAC----KSVSSCSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLIKQMEIKGEQISKLKKHQASVH--KLKQKTQKLK--RESAHVLPKSDDLKGTREIPVT--PS

GSASKNCPVQKSKSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_032620508.1/1-490 centrosomal protein CEP57L1 [Chelonoidis abingdonii]

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----------------------------------------------MPATVAAASLARARR-----------

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------------------------------------------------------------------RQEK--

-------------------T---------------------------MGSESKQSFI----GSFLQPP----

-D-------RM-FVPTFGQSKSK------------KV------TATTDDM-LPASN-------SQ-------

-------ALMSALKTLQEKICRLELERSQAEDNLSYLSVEAAQYKKTLQHETNVKDIEHEELIQQKKDVSVQ

LSAAQSRCSLLEKQLDYMRKIVFNAELEKNMVLEQQ------------------------------------

-----------TPLQKEKDQNHMQLHAKLEKLEILEKECFRLSTTQRTAEDKIKQLEEKLREEEHQRKLIQD

KAAQLQTGLEINRILTSSVSSQNEPTKKSRKKKTAK--------------------------KKSALKKVHP

PQFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CVLSWCVEADEH--

-----RISRRTIAC----KSASSCSTSS-SVTDNLSDLLLVIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKTQKLK--RQSAHVLPKSDDLKGTREIPVT--PS

RSASKNCPVQKSKSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_053879927.1/1-470 centrosomal protein CEP57L1 isoform X1 [Malaclemys terrapin pileata]

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-----------------------------------------------MGSESKQSFI----GSFLQPP----

-D-------RM-FVPTFGQSKSK------------KG------TATTGDM-LPAPN-------NQ-------

-------ALMSALKTLQEKIRRLELERSQAEDNLSCLSIEAAQYKKTLQHETNAKDLAHEELIQQKKDVSVQ

LSAAQSQCSLLEKQLDYMRKMVFNAELEKNMVLEQQ------------------------------------

-----------TQLQKEKDQKHMELHAKLEKLEVLEKECFRLLTTQRTAEDKIKILEEKLREEEHQRKLIQD

KAAQLQTGLEINRILTSSVSSQNEPKKKSRKKKTAK--------------------------KKSALKKVHP

PQFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CISSQCPEAAEH--

-----RISRRTIAC----KSVSSRSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKTQKLK--RQSAHVLPKSDDLKGTREIPVP--PS

GSASKNCPVQKSKSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_034621795.1/1-478 centrosomal protein CEP57L1 isoform X1 [Trachemys scripta elegans]

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----------------------------------------------------------MET-----------

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------------------------------------------------------------------SLME--

-------------------T---------------------------MGSESKQSFI----GSFLQPP----

-D-------RM-FVPTFGQSKSK------------KG------TATTGDM-LPAPN-------NQ-------

-------ALMSALKTLQEKIRRLELERSQAEDNLSCLSIEAAQYKKTLQHETNAKDLAHEELIQQKKDVSVQ

LSAAQSQCSLLEKQLDYMRKMVFNAELEKNMVLEQQ------------------------------------

-----------TQLQKEKDQKHMELHAKLEKLEVLEKECFRLLTTQRTAEDKIKILEEKLREEEHQRKLIQD

KAAQLQTGLEINRILTSSVSSQNEPKKKSRKKKTAK--------------------------KKSALKKVHP

PQFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CILSRCPEAAEH--

-----RISRRTIAC----KSVSSRSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKTQKLK--RQSAHVLPKSDDLKGTREIPVP--PS

GSASKNCPVQKSKSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_023958262.1/1-478 centrosomal protein CEP57L1 isoform X1 [Chrysemys picta bellii]

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----------------------------------------------------------MEI-----------

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------------------------------------------------------------------SLME--

-------------------T---------------------------MGSESKQSFI----GSFLQPP----

-D-------RM-FVPTFGQSKSK------------KG------TATAGDM-LPAPN-------NQ-------

-------ALMSALKTLQEKIRRLELERSQAEDNLSCLSIEAAQYKKTLQHETNAKDLAHEELIQQKKDVSVQ

LSAAQSHCSLLEKQLDYMRKMVFNAELEKNMVLEQQ------------------------------------

-----------TQLQKEKDQKHMELHAKLEKLEVLEKECFRLLTTQRTAEDKIKILEEKLREEEHQRKLIQD

KAAQLQTGLEINRILTSSVSSQNEPKKKSRKKKTAK--------------------------KKSALKKVHP

PQFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CILSQCPEAAEH--

-----RISRRTIAC----KSVSSRSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKTQKLK--RQSAHVLPKSDDLKGTREIPVP--PS

GSASKNCPVQKSKSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_024050060.1/1-470 centrosomal protein CEP57L1 [Terrapene carolina triunguis]

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-----------------------------------------------MGSESKQSFI----GSFLQPP----

-D-------RM-FVPTFGQSKSK------------KV------TATTGDM-LPAPN-------NQ-------

-------ALMSALKTLQEKIRRLELERSQAEDNLSCLSIEAAQYKKTLQHETNAKDLAHEELIQQKKDVSVQ

LSAAQSHCSLLEKQLDYMRKMVFNAELEKNMVLEQQ------------------------------------

-----------TQLQKEKDQNHMELHAKLEKLEVLEKECFRLLTTQRTAEDKIKQLEDKLREEEHQRKLIQD

KAAQLQIGLEINRILTSSVSSQNEPKKKSRKKKTAK--------------------------KKSALKKVHP

PQFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CILSRCPEAAEH--

-----RISRRTIAC----KSISSRSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKTQKLK--RQSAHVLPKSDDLKGTREIPVT--PS

GSASKNCPVQKSKSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_038253489.1/1-469 centrosomal protein CEP57L1 isoform X1 [Dermochelys coriacea]XP\_038253492.1 centrosomal protein CEP57L1 isoform X1 [Dermochelys coriacea]XP\_038253493.1 centrosomal protein CEP57L1 isoform X1 [Dermochelys coriacea]XP\_038253494.1 centrosomal protein CEP57L1 isoform X1 [Dermochelys coriacea]XP\_038253495.1 centrosomal protein CEP57L1 isoform X1 [Dermochelys coriacea]XP\_043366721.1 centrosomal protein CEP57L1 isoform X1 [Dermochelys coriacea]

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-----------------------------------------------MGSESKQSFI----GSFLQPP----

-D-------KM-FVPTFGQSKSK------------KA------TATTGDM-LPAPN-------NQ-------

-------ALMSALKTLQEKIRHLELERSQAEDNLSFLSIEAAQYKKTLQHETNEKDLAHEELIQQKKDVSVQ

LSAAQSRCSLLEKQLDYMRKMVFNAELEKNMVLEQQ------------------------------------

-----------TQLQKEKDRNQMELHAKLEKLEVLEKECFRFSTTQRTAEDKIKQLEEKLCEEEHQRKLIED

KAAQLQTGLEINRILMSSVSPQNEPKKKNQKKKTAK--------------------------KKSALKKVHP

PQFCLNAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CVLSRCPEAAEH--

-----RISRRTIAC----KSVSSCST-S-SVTENLSDLLLAIQDELGQMSFEHQE---LSKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKAQKLK--RQSAHVLPKSDDLKETREIPVT--SS

GRASKSCPVQKSKSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_048700801.1/1-470 centrosomal protein CEP57L1 isoform X1 [Caretta caretta]XP\_048700802.1 centrosomal protein CEP57L1 isoform X1 [Caretta caretta]

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-----------------------------------------------MGSESKQSFI----GSFLQPP----

-D-------KM-FVPTFGQSKSK------------KA------TATIGDM-LPAPN-------NQ-------

-------ALMSALKTLQEKIRHLELERSQAEDNLSCLSIEAAQYKKTLQHETNEKDIAHEELIQQKKDVSVQ

LSAAQSRCSLLEKQLDYMRKMIFNAELEKNMVLEQQ------------------------------------

-----------TLLQKEKDQNQMELHAKLEKLEVLEKECFRLSTTQRTAEDKIKQLEEKLCEEEHQRKLIQD

KAAQLQTGLEINRILMSSVSPQNEPKKKNRKKKTAK--------------------------KKSALKKVHP

PQFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CVLSRCPEAAEH--

-----RISRRTIAC----KSVSSCSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKAQKLK--RQSAHVLPKSDDLKGTREIPVT--SS

GRASKSCPVQKSKSSLQLLKNVQKLQSTLKKDDIVWEQ

>XP\_025040509.1/1-477 centrosomal protein CEP57L1 isoform X3 [Pelodiscus sinensis]

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-------------------------------------------------MHLAAKK----------------

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-------------------T---------------------------MDSESKQSFI----GSFLQPP----

-D-------RM-FAPTFGQSTLK------------KV------TATTNDV-LPAPN-------NQ-------

-------ALLSALQTLQEKIRRLELERSQAEDNLCCLSIEAAQYKKALQRETNEKDIAHGEMIQQKKDVSVQ

LSAAQSRCSLLEKQLDYMRKMVFNAELEKNMVLEQQ------------------------------------

-----------TLLQKEKDQNQMELHAKLEKLEALEKECFRLISTQRTAEDKIKQLEEKLREEEHQRKLIQD

KAAQLQTGLEINRILMSSESLQNEPKKRNRKKKTAK--------------------------KKSALKKVHP

PHFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSILHLMKHRS-P--CVLSRCPEPAEH--

-----RISRRTIAC----KSVSSCST-S-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKVQKLK--KQSAHVLPKSDDLNGTREVSVT--PS

KSASKTCPVQKSKSSLHLLKNAQKLQSTLKKDDILWEQ

>XP\_025040508.1/1-482 centrosomal protein CEP57L1 isoform X2 [Pelodiscus sinensis]

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---------------------------------------------------MAARAG---------------

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----------------------------------------------------------------SRQARG--

-------------------T---------------------------MDSESKQSFI----GSFLQPP----

-D-------RM-FAPTFGQSTLK------------KV------TATTNDV-LPAPN-------NQ-------

-------ALLSALQTLQEKIRRLELERSQAEDNLCCLSIEAAQYKKALQRETNEKDIAHGEMIQQKKDVSVQ

LSAAQSRCSLLEKQLDYMRKMVFNAELEKNMVLEQQ------------------------------------

-----------TLLQKEKDQNQMELHAKLEKLEALEKECFRLISTQRTAEDKIKQLEEKLREEEHQRKLIQD

KAAQLQTGLEINRILMSSESLQNEPKKRNRKKKTAK--------------------------KKSALKKVHP

PHFCLKAGMLPFVAG-------K------SASSS-HSVSANV-QSILHLMKHRS-P--CVLSRCPEPAEH--

-----RISRRTIAC----KSVSSCST-S-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETQNCEVR

EDLERELDCLVKQMEIKGEQISKLKKHQASVH--KLKQKVQKLK--KQSAHVLPKSDDLNGTREVSVT--PS

KSASKTCPVQKSKSSLHLLKNAQKLQSTLKKDDILWEQ

>XP\_019375663.1/1-471 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Gavialis gangeticus]XP\_019375664.1 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Gavialis gangeticus]

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-----------------------------------------------MDSESKHSFI----GSFLQPP----

-D-------KS-KYSTFAHRKSK------------KL------TTAVGHL-PSGPD-------NQ-------

------VALMAALKTLQEKIHRLELERSQAEENLSSLSVEAAQYKKALHHESCEKDIAHQELMQQKKDVSVQ

LSAAQSHCSLLEKQLDYMRKMVFSAEQDKKMVLQQQ------------------------------------

-----------TQLQKEKNQNQMELHAKLEKLEVLEKECFKLTTTQKTAEVKIKQLEEKLREEEHQRKLIQD

KAAQLQTGFEINRILMSSVSSQNEPKRKNRKKKTVK--------------------------KNPSLKKVTP

PQFYVKTGVLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CISSQHPEKAER--

-----RVSRRTIAS----KSVSSCSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETENCKVR

EDLERELDCLVKRMEIKGDQISKLKKHQASVQ--KLREKAQKLK--REAAYVKLKSDDMEGIKEIPVT--PK

ENGSISCPGQKSKRCLQLLKNMQKLQSTLKKDDIMWEQ

>XP\_019393417.1/1-471 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Crocodylus porosus]XP\_019393418.1 PREDICTED: centrosomal protein CEP57L1 isoform X1 [Crocodylus porosus]

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-----------------------------------------------MDSESKHSFI----GSFLQPP----

-D-------KS-KYSTFAHRKSK------------KL------TTAVGDL-PSVPD-------NQ-------

------VALMAALKTLQEKIHRLELERSQAEENLSSLSVEAAQYKKALHHESCEKDIAHQELMQQKKDVSVQ

LSAAQSRCSLLEKQLDYMRKMVFSAEQDKKVVLQQQ------------------------------------

-----------TQLQKEKNQNQMELHAKLEKLEILEKECFKLTTTQKTAEVKIKQLEEKLCEEEHQRKLIQD

KAAQLQTGLEINRILMSSVSSQNEPKRKNRKKKTVK--------------------------KNPSLKKVTP

PQFYVKTGVLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKHRS-P--CVSSQHPEKAER--

-----RVSRRTIAS----KSVSSCSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETENCKVR

EDLERELDCLVKRMEIKGDQISKLKKHQASVQ--KLREKAQKLK--REAAHVKLKSDDMEGIKEIPVT--PK

ENGSISCPGQKSKRSLQLLKNMQKLQSTLKKDDIMWEQ

>XP\_006029978.1/1-471 centrosomal protein CEP57L1 isoform X1 [Alligator sinensis]XP\_006029979.1 centrosomal protein CEP57L1 isoform X1 [Alligator sinensis]XP\_025067195.1 centrosomal protein CEP57L1 isoform X1 [Alligator sinensis]

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-----------------------------------------------MDSESKHSFI----GSFLQPP----

-D-------KS-KYSTFAHRKSK------------KL------TTAMGDL-PSGPD-------NQ-------

------VALMAALKTLQEKIHRLELERSQAEENLSSLSVEAAQYKKALHHESCERDITHQELMQQKKDVSMQ

LSAAQSRCSLLEKQLDYMRKMVFSAEQEKKMVLQQQ------------------------------------

-----------TQLQKEKNQNQMELHAKLEKLEVLEKECFKLTTTQKTAEDKIKQLEEKLREEEHQRKLIQD

KAAQLQTGLEINRILMSSVSSQNEPKRKNRRKKTVK--------------------------KNPSLKKVTP

PQFYVKTGVLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKYRS-P--CVSSQYPEKAEC--

-----RVSRRTIAS----KSVSSCSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LVKQIQETENCEVR

EDLERELDCLVKRMEIKGDQISKLKKHQASVQ--KLREKAQKLK--REAARVKLKSDDMEGIKEIPVT--PK

ENDSISCPGQKSKSSLQLLKNMQKLQSTLKKDDIMWEQ

>KYO24703.1/1-501 centrosomal protein CEP57L1 isoform B [Alligator mississippiensis]

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---------------------------------------------------MAPAAG------P--------

--------------------------------------------------------------SVNY-NSQEA

TRKMRQ---------------------------------------------------------EQRRAEQ--

-------------------T---------------------------MDSESKHSFI----GSFLQPP----

-D-------KS-KYSTFAHRKSK------------KL------TTAMGDL-PSGPD-------NQ-------

------VALMAALKTLQEKIHRLELERSQAEENLSSLSVEAAQYKKTLHHESCEKDITHQELMQQKKDVSMQ

LSAAQSRCSLLEKQLDYMRKMVFSAEQEKKMVLQQQ------------------------------------

-----------TQLQKEKNQNQMELHAKLEKLEVLEKECFKLTTTQKTAEDKIKQLEEKLHEEEHQRKLIQD

KAAQLQTGLEINRILMSSVSSQNEPKRKNRRKKTVK--------------------------KNPSLKKVTP

PQFYVKTGVLPFVAG-------K------SASSS-HSVSANV-QSVLHMMKYRS-P--CVSSQYPEKAEC--

-----RVSRRTIAS----KSVSSCSTSS-SVTENLSDLLLAIQDELGQMSFEHQE---LLKQIQETENCEVR

EDLERELDCLVKQMEIKGDQISKLKKHQASVQ--KLREKAQKLK--REAARVKLKSDDMEGIKEIPVT--PK

ENYSISCPGQKSKSSLQLLKNMQKLQSTLKKDDIMWEQ

>NXS46254.1/1-431 CE57L protein [Balaeniceps rex]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM--PEAFAYTESE------------KL------AAVGGDR-PSTPN-------NQ-------

-------AMVAALKTLQEKIRRLELEKSQAEDNLCSLSIVAAQYKKALEHESYRKDTAHQELMQKRKDVSVQ

LNAAQSRCSLLEKQLDYMREMVSSAELEKKMVLEQQ------------------------------------

-----------AQLKKEEDQNRLELHAKLEKLEMLEKECLKLTATQKIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQVGLEINRILMSSVTSQNEPKKENGKKKKPK-------------------K------------KMHP

SQLHVKAGELPFVAG-------K------------------V-------------------------TTS--

-----GISGRSALS----KSVSSRSTSP-TG-EGLSDLLLAIQDELGQMSFEHQE---LLKQMQETQDSKVR

EDLEQELDCLVKQMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--QGAAHVKLNCGNQKEAKEIAVT--VR

ESMSKSCPGQKSRSSLQLLKNVQKLQSTLKKTDTMWEQ

>NXW06856.1/1-433 CE57L protein [Fregetta grallaria]

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-----------------------------------------------------NSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDR-PSIPT-------NQ-------

-------AVVAALKTLQEKIRRLELEKAQAEDNLCSLSVAAAQYKKALEHESCKKDTAHQELMQQRKDVSAQ

LSAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEEDQNRLALHAKLEKLEMLEKECLKLTATQRIAEDKIKHLEEKICKEEHQRKLIQD

KTAQLQRGFEINRILMSSVTSQNEPKKENRKKKKTK-------------------M------RNPTTKKMHL

SQLHVKAGELPFVAG-------K------------------V-------------------------TTS--

-----GISGRSELP----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHQE---LLKQIQETQDSKVR

EDLGQELNCLVKQMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--QGAAHIKLKCGEQKEAKEIAVT--GR

ESMSKSCPGQKSKSSLQLLKTVQKLQSTLKKDDIMWEQ

>KAF1620095.1/1-438 Centrosomal protein CEP57L1, partial [Eudyptes robustus]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSVPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYRKALEHESYKKDTAHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLE-Q------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEILEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENEQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSALS----KSVSSCSTSP-TATTSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISELKKHQATVQ--KLKIKTQKLK--QGTAHVKLKCGDQKEEKKIAVT--VR

ESVSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>KAF1563393.1/1-438 Centrosomal protein CEP57L1, partial [Eudyptes pachyrhynchus]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSVPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYRKALEHESYKKDTAHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLE-Q------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEILEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENEQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELDQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISELKKHQATVQ--KLKIKTQKLK--QGTAHVKLKCGDQKEEKKIAVT--VR

ESVSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>KAF1558477.1/1-438 Centrosomal protein CEP57L1, partial [Eudyptes schlegeli]KAF1615545.1 Centrosomal protein CEP57L1, partial [Eudyptes chrysolophus]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYRKALEHESYKKDTAHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLE-Q------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEILEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENEQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISELKKHQATVQ--KLKIKTQKLK--QGTAHVKLKCGDQKEEKKIAVT--VR

ESVSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>KAF1635255.1/1-438 Centrosomal protein CEP57L1, partial [Eudyptes filholi]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSVPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYRKALEHESYKKDTAHQELMQQRKDTSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLE-Q------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEILEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENEQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISELKKHQATVQ--KLKIKTQKLK--QGTAHVKLKCGDQKEEKKIAVT--VR

ESVSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>KAF1644373.1/1-438 Centrosomal protein CEP57L1, partial [Eudyptes chrysocome]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYRKALEHESYKKDTAHQELMQQRKDTSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLE-Q------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEILEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENEQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISELKKHQATVQ--KLKIKTQKLK--QGTAHVKLKCGDQKEEKKSAVT--VR

ESVSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>KAF1515909.1/1-438 Centrosomal protein CEP57L1, partial [Eudyptes sclateri]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-PPAAFAYIESK------------KL------AAVGGDK-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYRKALEHESYKKDTAHQELMQQRKDTSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLE-Q------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEILEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENEQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISELKKHQATVQ--KLKIKTQKLK--QGTAHVKLKCGDQKEEKKIAVT--VR

ESVSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>KAF1588294.1/1-438 Centrosomal protein CEP57L1, partial [Eudyptes moseleyi]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSVPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYRKALEHESYKKDTAHQELMQQRKDISVQ

LNAAQSRCSLLEKQLGYMRKMVSSAELEKEMVLE-Q------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEILEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENEQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKEMEIKGEQISELKKHQATVQ--KLKIKTQKLK--QGTAHVKLKCGDQKEEKKIAVT--VR

ESVSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>KAF1467850.1/1-438 Centrosomal protein CEP57L1, partial [Megadyptes antipodes antipodes]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYRKALEHESYKKDTAHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLE-Q------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEILEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENEQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGCSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMDIKGEQISKLKKHQATVQ--KLKIKTQKLK--QGTAHVKLKCGDQKEEKKIAVT--VR

ESVSKSCPGQKSRSSLELLKNVQKLQSTLKKDDIMWEQ

>KAF1664889.1/1-438 Centrosomal protein CEP57L1, partial [Aptenodytes patagonicus]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIKSK------------KL------AAVGGDK-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLEQQ------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEILEKECLKLAATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENGQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELDQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISKLKKHQATVQ--KLKIKTQKLK--QGAAHVKLKCGDQK-EKKIAVT--VR

ESMSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>KAF1483898.1/1-439 Centrosomal protein CEP57L1, partial [Pygoscelis antarcticus]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLEQQ------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEILEKECLKLAATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENRQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISKLKKHQATVQ--KLKIKTQKLN--QGAAHVKLKCGDQKEEKKIAVT--VR

ESMSKSCPGQKSGSSLQLLKNVQKLQSTLKKDDIMWEQ

>KAK1212658.1/1-439 CE57L protein, partial [Pygoscelis papua]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAATQYKKALEHESYKKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLEQQ------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEILEKECLKLAATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENGQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDQEGELDCLVKQMEIKGEQISKLKKHQATVQ--KLKIKTQKLN--QGAAHVKLKCGDQKEEKKIAVT--VR

ESMSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>KAF1672427.1/1-439 Centrosomal protein CEP57L1, partial [Pygoscelis papua]KAK0681245.1 CE57L protein, partial [Pygoscelis papua]KAK1190269.1 CE57L protein, partial [Pygoscelis papua]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAATQYKKALEHESYKKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLEQQ------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEILEKECLKLAATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENGQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISKLKKHQATVQ--KLKIKTQKLN--QGAAHVKLKCGDQKEEKKIAVT--VR

ESMSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>KAF1396544.1/1-439 Centrosomal protein CEP57L1, partial [Spheniscus humboldti]KAF1430864.1 Centrosomal protein CEP57L1, partial [Spheniscus magellanicus]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYRKALEHESYKKDTAHQELMQQRKDVSVQ

LNVAQSRCSLLEKQLDYMRKMVSSAELEKEMVLEQQ------------------------------------

-----------VQLQKEEDQNWLELHAKLEKLEILEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENGQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSTLS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISKLKKHQATVQ--KLKIKTQKLK--QGAAHVKLKCGDQKEEKKIAVT--VR

ESVSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>KAF1463819.1/1-439 Centrosomal protein CEP57L1, partial [Spheniscus demersus]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYRKALEHESYKKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLEQQ------------------------------------

-----------VQLQKEEDQNWLELHAKLEKLEILEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENGQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSTLS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISKLKKHQATVQ--KLKIKTQKLK--QGAAHVKLKCGDQKEEKKIAVT--VR

ESVSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>KAF1435873.1/1-439 Centrosomal protein CEP57L1, partial [Spheniscus mendiculus]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYRKALEHESYKKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLEQQ------------------------------------

-----------VQLQKEEDQNWLELHAKLEKLEILEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENGQKKKTK-------------------K------RNPTMKKTHV

SQLHVKAGELPFVAG-------K------V-------------------------------------TTS--

-----GISGRSTLS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISKLKKHQATVQ--KLKIKTQKLK--QGAAHVKLKCGDQKEEKKIAVT--VR

ESVSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_009892172.1/1-451 PREDICTED: centrosomal protein CEP57L1 [Charadrius vociferus]

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-----------------------------------------------MDSESKNSFI----GSFLHPP----

-D-------KL-LPAAFAYIESK------------KL------AAVGGDR-PSVPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQCKKALEHESYKRDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEENQNQLELHAKLEKLEMLEKECLKLTATQRTAEDKIKCLEEKLCKEEHQRKLIQE

KTAQLQMGLEINRILMSLVTSQKEPEKENRKKKKTR-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K----------------------------HRN-P--RISPRSQGGATS--

-----GISGHSALS----KSVSSCSTSP-TANSSLSDLLLAIQDELGQMSFKHQE---VLKQIQETQDSKVR

EDLKRELDCLVKQMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--QEAAHVKLKCGDQKEAKEIAVT--VR

KSMSKSCPGQKSRSSLQLLKSVQKLQSTLKKDDIMWEQ

>NXY72152.1/1-439 CE57L protein [Glareola pratincola]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIASK------------KL------AAVDSDR-PSIPN-------NQ-------

-------AVVAALKTLQEKIRHLELEKSQAEDNLRSLSVAAAQYRKALEHESYEKDAVHRELMQQKKDINVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEEGQNQLELHAKLEKLEMLEKECFKLTATQRIAEDKIKHLEEKLCKDKHQRKLIQG

KTAQLQTGFETNRILMSLVTSQSEPKKENGKKKKTK-------------------K------RNPKMKKIHL

SQLHVKAGELPFVAG-------K------V-------TSSGI------------------------------

-------SGHSALS----KPVSSCSTSP-TATRSLSDLLLDIQDELGQMSFKHQE---LLKKMREIEDSKVL

EDLKRELDCLVKQMEIKGEQISKMKKHQATVQ--KLKRKTQKLK--QGTARVEVKCGDKKEAKEIAVT--VR

KNFSRSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>NWT40437.1/1-439 CE57L protein [Chroicocephalus maculipennis]

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-----------------------------------------------MDSQSKNSFV----GSFLQPP----

-D-------KM-LPAAFAYVESK------------KL------AAVGGDR-PSIPN-------NQ-------

-------ALVAALKTLQEKIHHLELEKSQVEDNLRSLSIAAAQYRKALKHESYKRDTVHQELMQQRKDISVQ

INAAQSRCSLLEKQLDYMRKMVSSAELEKKIILEQQ------------------------------------

-----------AQFQKEEDQKRLELHAKLEKLEMLEEVCFKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTAFEINRILMSLVTSQNEPKKENGKKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------V-------TSSGI------------------------------

-------SAHSALS----KPVSSCSTSP-TATRNLSDLLLAIQDELGQMSFKHQE---LLKKIQEIEDSRVC

EGLEGELDCLVKQMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--QGAAHVELKCGDKKEAKEIAVT--VR

KSFSKSCPGQKSRSSLQLLKYVQKLQSTLKKDGIMWEQ

>NWU52984.1/1-439 CE57L protein [Dromas ardeola]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAAGGDR-PSIPN-------NQ-------

-------AVVAALKTLQEKIRHLELEKSQAEDNLCSLSVAAAQYRKALEHESYEKDTVHRELMQQRKDISVR

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEMLEEECFKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSLVTSQNEPKKENGKKNRTK-------------------K------RNPTMNKMHL

SQLHVKAGELPFVAG-------K------V-------TSSGI------------------------------

-------SGHSALS----KPVSSCSTSP-TATRSFSDLLLAVQDELGQMSFKHQE---LLKKVQEIEDSKVC

EDLERQLDCLVKQMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--EGAAHVELKRGDKKEAKEIAVT--VR

KSFSKSCPGEKSRSSLQLLKNVQKLQSTLKKDGIMWEQ

>NXV45773.1/1-440 CE57L protein [Uria aalge]

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-----------------------------------------------MDSESKDSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGSDR-PSIPN-------NQ-------

-------AVVAALRTLQEKIHHLELEKSQAEDNLRSLSIAAAQYRKALEHESYERDTVHRELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLPKEEDQNRLELHAKLEKLEMLEKECFKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEMNRILMSLVTSQNEPKKEKGKKKKTK-------------------K------RNPTMKKMHL

SQLHVKAGELPFVAG-------K------V------RVSSGI------------------------------

-------SGHSALS----KPVSSCSTSP-TATRSLSDLLLAIQDELGQMSFKHQE---LLKKIQEIEDSRVH

EDLEGELDYLVKQMEIKGEQISKLKKHQATVQ--KLKRKTQKTK--QGAAHVKLNCGDKKEAKEIAVT--VR

KSFSKSCPGQKSRSSLQLLKNVQKLQSTLKKDGIVWEQ

>NWX72974.1/1-445 CE57L protein [Alca torda]

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-----------------------------------------------MDSESKDSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGSDR-PSIPN-------NQ-------

-------AVVAALRTLQEKIHHLELEKSQAEDNLRSLSIAAAQYRKALEHESYERDTVHRELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEMLEKECFKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSLVTSQNEPKKEKGKKKKTK-------------------K------RNPTMKKMHL

SQLHVKAGELPFVAG-------K------SVSSS-HSVSANV------------------------------

-------QRHSALS----KPVSSCSTSP-TATRSLSDLLLAIQDELGQMSFKHQE---LLKKIQEIEDSRVH

EDLEVELDCLVKQMEIKGEQISKLKKHQATVQ--KLKRKTQKTK--QGAAHVKLNCGDKKEAKEIAVT--VR

KSFSKSCPGQKSRSSLQLLKNVQKLQSTLKKDGIMLEQ

>NXN60021.1/1-445 CE57L protein [Rynchops niger]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYTESK------------KL------AAVGGDT-PSLPN-------NQ-------

-------AVVAALKTLQEKIHHLELEKSQAEDNLRSLSIAAAQYRKALEHESYERGTVHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRRMVSVAELEKKMVLEQQ------------------------------------

-----------AQFQKQEDQNRLELHAKLEKLEMIEKECFKLTATQRIAEDKIKHLEEKLCKEEHQHKLIQD

KTAQLQTGFEINRILMSLVTSQNEPKKENGKKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------SVSSS-HSVSANV------------------------------

-------QRRGALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFKHQE---LLKKIQEIEDSRVR

EDLEGELDCLVKQMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--QGAAHVELKCGDKNEAKEIAVT--VR

KSFSKSCPGQKSRSSLQLLKNVQKLQSTLKKDGIVWEQ

>NXL48732.1/1-437 CE57L protein [Podilymbus podiceps]

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-----------------------------------------------MDSESKNSFI----GSFLQLP----

-D-------KM-LPAAFAHGESK------------KL------AAVGGDR-PSIPN-------NQ-------

-------AVVAALKNLQEKIRRLELEKSQAEDNLCNLSMAAARFKKALERESYKKDVAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEEDQNWLELHTKLEKLEVLEKECLKLTATQRIAEDKIKHLEDKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENERKKKTK-------------------K------RNPTRKKMHL

SQLHVKAGELPFVAG-------K--------------VRPNVLAK---------------------------

---------VVALS----KSVSSCSTSP-ATTRSLSDLLLAIQDELGQMSFEHQE---LLKHIQETQDSRVC

EALEQELDCLVKQMKIKGEQISKLKKHQATVQ--KLK--TQKLK--QGTAHVKLKCGDQKEAKEIKIS--VR

ENMSKSCPGQKSRSCLQLLKNVQKLQSTLKKDDIMWEQ

>KFZ54356.1/1-443 Centrosomal protein cep57l1 [Podiceps cristatus]

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-----------------------------------------------MDSESKNSFI----GSFLQLP----

-D-------KM-LPAAFAHRESK------------KL------AAVGGDR-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCNLSMAAARFKKALEHESYKKDVAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEEDQNWLELHAKLEKLEVLEKECLKLTATQRIAEDKIKHLEDKLCKEEHQRKIIQD

KMAQLQTGFEINRILMSSVTSQNEPKKENERNKKTK-------------------K------RNPTMKKMHL

SQLHEKAGKLPFVAG-------K------SVSSS-HSVSANV-QR---------------------------

---------RSALS----KSVSSCSTLP-ATTRSLLDLLLAIQDELGQMSFEHQE---LLKHIQETQDSRVC

EALEQELDCLVKQMKIKGEQISKLKKHQATVQ--KLK--TQKLK--QGTAHVQLKCGDQKEAKEIKVT--VR

ENMSKSCPGQRSRSCLQLLKNVQKLQSTLKKDGIMWEQ

>KFV99501.1/1-441 Centrosomal protein CEP57L1, partial [Fulmarus glacialis]

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-----------------------------------------------MDSESKNSFI----GSFLPPP----

-D-------KM-LPAAFAYIES-------------KL------AAVDVDR-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKAQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQKKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEEDQNRLALHAKLEKLEMLEKVCLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENRKKKKTK-------------------K------WNSTMKKM--

-QLHVKAGELPFVAG-------K------SVSSS-HSVSANV-QR---------------------------

---------RSALS----KSVSSCSTSP-TATRSLSDLLLALQDELGQMSFEHQE---LLKQIQETQDSKVR

EDLEQELDCLIKQMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--QGAAHVKLKCGDQKEAKKIAVT--VR

ESMSKSCPGQQSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_009586474.1/1-447 PREDICTED: centrosomal protein CEP57L1 [Fulmarus glacialis]

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-----------------------------------------------MDSESKNSFI----GSFLPPP----

-D-------KM-LPAAFAYIES-------------KL------AAVDVDR-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKAQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQKKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEEDQNRLALHAKLEKLEMLEKVCLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENRKKKKTK-------------------K------WNSTMKKM--

-QLHVKAGELPFVAG-------KHRNPRISSRSQ-GGATSGI-SG---------------------------

---------RSALS----KSVSSCSTSP-TATRSLSDLLLALQDELGQMSFEHQE---LLKQIQETQDSKVR

EDLEQELDCLIKQMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--QGAAHVKLKCGDQKEAKKIAVT--VR

ESMSKSCPGQQSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>NXH79175.1/1-444 CE57L protein [Oceanodroma tethys]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPGAFAYIESK------------KL------AAVGGDR-PSIPN-------NQ-------

-------AVVTALKTLQEKIRRLELEKAQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKDVSVK

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMGLE-Q------------------------------------

-----------AQLQKEEDQNQLALHAILEKLEMLEKECLKLTATQRTAEDKIKHLEEKLCKEAHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENGKKKKTK-------------------K------RNPTMKKMHL

SQLHVKAGELPFVAG-------K------SVGSS-HSVSANV-QR---------------------------

---------RSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFDHQE---LLKQIQETQDSKVC

EDLEQKLDCLVKKMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--QGAAHVKIKCGGQKEAKEIAVT--VR

ESMSKPCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>KFP50146.1/1-445 Centrosomal protein CEP57L1 [Cathartes aura]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------TL------AAVGGDR-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVASAELEKKVVLEQQ------------------------------------

-----------AQVQKEEDQNRLELHAKLEKLEMLEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQKEPKKENGKKKKTK-------------------K------RNPAMKQMHI

SQLRVKAGELPFVAG-------K------SVSSS-HSVSANV-QR---------------------------

---------RSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFVHQE---LLKQMQETQDSKVC

EYLEQELDCLVKQMETKGEQISKLKKHQATVQ--KLKRKTQKLK--QGAAHVKLKCDDQKKAKETAVT--VR

ESMSKLCPGQKSRSSLQLLQNVRKLQSTLKKDDIMWEQ

>KFQ95634.1/1-445 Centrosomal protein CEP57L1, partial [Nipponia nippon]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KL-LPAAFACIESK------------KL------AAVGCDR-SSIPN-------NQ-------

-------AVVAALKTLKEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLKKEEVQNRLELHAKLEKLEMLEKECLKLTATQRIAEDKIKHLEEKLCKEEHQCKLMQD

KTAQLQTGFEINRILMSSVTSQNEHKKENGKKKKTK-------------------K------RNPAMKKMHL

PQLHVKAGELPFVAG-------K------SVGSS-HSVSANV-QR---------------------------

---------CSALS----KSVSSCSTSP-TATRSLSDLLLLIQDELGQMSFEHQE---LLKQIQETQDSKVH

EDLERELDCLVKRMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--QGAAHIKLKCGDQKEAKEIAVT--VR

ECTSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>NWH53765.1/1-445 CE57L protein [Fregata magnificens]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAAGGDR-PSIPN-------NR-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEEGQNWLELHAKLEKLEMLEKECLKLTVTQRIAEDKIKHLEEKLCKEEHQRKLIQD

RTAQLQTGFEINRILMSSVTSKNEPKKENGKKKKTK-------------------K------RNPTMKKMHL

SQLQVKAGELPFVAG-------K------SVGSS-HSVSANV-QR---------------------------

---------CSALS----KSVSSGSTSP-AATRSLSDLLLAIQDELGQMSFEHQE---LLKQIQDTQESKVR

EDLERELDCLVKQMEIKGEQITKLKKHQAAVQ--KLKRKTQKLK--QGAAYVKLKWGDQKEAKEIAVT--VR

ENMSKSCPGQKSRSSLQLLKNVQKLQSALKKDDIMWEQ

>KFQ54165.1/1-445 Centrosomal protein cep57l1, partial [Pelecanus crispus]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVCRDR-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKGTAHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMREMVSSAELEKKMVLEQQ------------------------------------

-----------AQLKKEEDQNRLELHAKLEKLEMLEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLTQD

KTAQLQRGFEINRILMSSATSPNEPKKENGKKKKPK-------------------K------RNPTMKKMHL

SQLHVKAGELPFVAG-------K------SVGSS-HSVSANV-QR---------------------------

---------RSALS----KSVSSCSTSP-AASRSLSDLLLAIQDELGQMSFEHQE---LLKQIQETQDSKVR

EDLERELDCLVKQMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--QGAAHVKLKCGDQKEAKEFAVT--VR

ENMSKSCPGQKSRSSLQLLKNVRKLQSTLKKDDIMWEQ

>KFQ89500.1/1-445 Centrosomal protein CEP57L1 [Phoenicopterus ruber ruber]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFSYRESK------------KL------AAVGGDR-PSIPN-------YQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESDKKDIAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMILEQQ------------------------------------

-----------AQLQKEEDQNWLELHAKLEKLEVLEKECLKLTATQRIAEDKIKHLEDKLCKEEHQRKLIQD

KTTQLQTGFEINRILLSSVTSQNEPKKENEKKKKTK-------------------K------RNPTIKKMHL

SQLHVKAGELPFVAG-------K------SVSSS-HSVSANV-QR---------------------------

---------RSALS----KPVSSCSTSP-TATRSLSDLLLAIQDELGQMSFDHQE---LLKQIQETQDSRVH

QDLERKLDCLVKQMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--QGTAHVKLKCGDQKKAKEIAVT--VK

ESMSKSCPGQKSRSCLQLLKNVQKLQSTLKKNDIMWEQ

>NXO47308.1/1-442 CE57L protein [Aramus guarauna]

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-----------------------------------------------MDSASKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDG-PSIPN-------DQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMKKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEEDQNWLELRAKLEKLEMLEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLMQD

KTVQLQTGFEINRILMSSVKSQNEPKKENGKKKKPK-------------------K------RNPAMKKMHL

SQLHVKAGELPFVAG-------K------SVSSS-HSVSANV-Q----------------------------

---------SVALS----KSVSSGPTSP-TATRSLSDLLLAIQDELGQMSFEHQE---LLKQIQETQDARVC

EHLEWELDCLVKQMEIKGEQISKLKKHQASVQ--KLKRKTQKLK--QGAAHVKLKRGDQKETKETA----VR

ESISRSCPGQKSRSSLQLLKNVRKLQSTLKKDDIMWEQ

>NXI90958.1/1-443 CE57L protein [Psophia crepitans]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAIGGDR-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESYEKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEKDQNWLELCAKLEKLEMLEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTVQLQTVFEINRILMSSVTSQNEPEKENGKKKKTK-------------------K------RNPMMKKMHL

SQFHIKAGELPFVAG-------T------SVSSS-HSVSANV-QR---------------------------

---------GSVLS----QSISSGSTSL-TATRSLSDILLAIQDELGQMTFEHQE---LLKQIEETQDTKVC

EHLERELDCLVKRMDMKAEQISKLKKHQASVQ--KLKRKTQKLK--QMTGHIKLKCGDQKETKETA----GR

ESMSKCSLGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>NXS61249.1/1-439 CE57L protein [Brachypteracias leptosomus]

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-----------------------------------------------MDSESKNSFI----GRLLQPP----

-D-------KM-LPAAFAHKESK------------KL------AAVGSDR-PSIPN-------NQ-------

-------AVVAALKTLQEKIHCLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDIAHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSNAELENKMVLEQQ------------------------------------

-----------AQLQKEEDQNWLKLHAKLEKLEMLEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENGKRKKTK-------------------K------RNPTMKKMHL

SPLLVKAGELPFVAG-------K------VTTSK-TS-----------------------------------

--------GHGAFS----KSLSFCSTSP-SATGSLSDLLLAVQDELGQMSFEHQE---LLKQIQETQDSRVR

EDLEQELDCLVKQMDIKGEQISKLKKHRATMQ--KLKRKIQELK--QGTAHVKLKCDSQKEAKEITLT--LR

ESMSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>NXW56482.1/1-443 CE57L protein [Eurystomus gularis]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KK-LPAAFAHKESK------------KL------AAVGGHR-PSIPN-------NQ-------

-------AVVTALKTLQEKIHCLELEKSQAEDNLCNLSIAAAQYKKALEHESYKKDIAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELENKMVLEQQ------------------------------------

-----------AQLQKEEDRNWLELHAKLEKLEMLEKECLKLSATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNGPKKENGKKKKTK-------------------K------RNPTMKKMHL

SQLHVKAGELPFVAG-------K------SVSSS-HSVSANV------------------------------

-------QRHSAFS----KSLSSCSTLP-TATGSLLHLLLAIQDELGQMSFEHQE---LLKQIQETQDSKVR

EDLEQELDCLVKQMDIKGEQISKLKKHQASVQ--KL--KTQKLK--QGAAHVKLKCDGQKEAKEIAVT--VR

ESVSKTCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEK

>NWY50920.1/1-436 CE57L protein [Chionis minor]

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-----------------------------------------------MEYESKNSFI----GSFFQPP----

-D-------KI-LPAAFAYTESK------------NL------AAV-CDR-PSIPS-------NQ-------

-------AVMAALKTLQEKIHRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDKAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEEDQNWLELHAKLEKLEMLEKECLKLSATQRTAEDKIRHLEEKLRKEEHQRKLIQD

KTAQLQVGFEINRMLMSSVTSQNEPKKENGKKKKTK-------------------K------RNPTMKKMHL

LQLHVKAGELPFVAG-------K--------------VSESK------------------------------

--------WHSALS----KSVSSCYASP-IDTRNLPDLLLAMQDELGQMSFEHQE---LLKQIQEIQDSKVR

EGLERELDCLVKQMEIKGEQICKLKKHQATVQ--KLKRKTQILK--QEAAHVKQKCGDQKEAKEIAVT--IR

KSVSKSCAGQKSRNSLQLLKNVQKLQSTLKKDGIMWEQ

>NXT51243.1/1-437 CE57L protein [Pluvianellus socialis]

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-----------------------------------------------MDSESKNSFI----GSFFQPP----

-D-------KM-LPAALAYTESK------------KL------AAVGGDR-PSIPS-------NQ-------

-------AVMAALKTLQEKIHRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDKAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEEDQNWLELHAKLEKLEMLEKECLKLSATQRTAEDKIKHLEEKLRKEEHQRKLIQD

KTAQLQVGFEINRMLMSSVTSQNEPKKENGKKKKTK-------------------K------RNPTMKKTHL

LELQVKAGELPFVAG-------K--------------VSESK------------------------------

--------WHSALS----KSVSSCYASP-TDTRNLLDLLLAVQDELGQMSFEHQE---LLKQIQETQDSKVR

EGLERELDCLVKQMEIKGEQICKLKKRQATVQ--KLKRKTQKLK--QEAAHGKQKCGDQKEAKEIAVT--IR

KSVSKSCAGQKSRNSLQLLKNVQKLQSTLKKDGIMWEQ

>XP\_009461636.1/1-467 PREDICTED: centrosomal protein CEP57L1 [Nipponia nippon]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KL-LPAAFACIESK------------KL------AAVGCDR-SSIPN-------NQ-------

-------AVVAALKTLKEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

---------------KEEVQNRLELHAKLEKLEMLEKECLKLTATQRIAEDKIKHLEEKLCKEEHQCKLMQD

KTAQLQTGFEINRILMSSVTSQNEHKKENGKKKKTK-------------------K------RNPAMKKMHL

PQLHVKAGELPFVAG-------K------SVGSS-HSVSANV-QSVLHIMKHRN-P--HISSRSQGGATS--

-----GISGCSALS----KSVSSCSTSP-TATRSLSDLLLLIQDELGQMSFEHQE---LLKQIQETQDSKVH

EDLERELDCLVKRMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--QGAAHIKLKCGDQKEAKEIAVT--VR

ECTSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_009324697.1/1-467 PREDICTED: centrosomal protein CEP57L1 [Pygoscelis adeliae]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDK-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLEQ-------------------------------------

--------------QKEEDQNRLELHAKLEKLEILEKECLKLAATQRITEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENGQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------SVGSS-HSVSANV-QSVLHIMKHRN-P--CISSRSQGGATS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISKLKKHQATVQ--KLKIKTQKLN--QGAAHVKLKCGDQKEEKKIAVT--VR

ESMSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_019330150.1/1-470 PREDICTED: centrosomal protein CEP57L1 [Aptenodytes forsteri]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIKSK------------KL------AAVGGDK-PSIPN-------NQ-------

-------AVVAALKTLQEKICRLELEKSQAEDNLCSLSIAAAQYKQALEHESYKKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKEMVLEQQ------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEILEKECLKLAATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENGQKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------SVGSS-HSVSANV-QSVLHIMKHRN-P--CISSRSQGGATS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELDQMSFEHEE---LLKQIQETQDSKVR

EDLEGELDCLVKQMEIKGEQISKLKKHQATVQ--KLKIKTQKLK--QGAAHVKLKCGDQK-EKKIAVT--VR

ESMSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_050750837.1/1-471 centrosomal protein CEP57L1 [Gymnogyps californianus]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------TL------AAVGGDR-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESCKKDTAHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVASAELEKKVVLEQQ------------------------------------

-----------AQVQKEEDQNRLELHAKLEKLEMLEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQKEPKKENGKKKKTK-------------------K------RNPAMKKVHI

SQLRVKAGELPFVAG-------K------SVSSS-HSVSANV-QSVLHIMKHRN-P--RISSQSQGGATS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFVHQE---LLKQMQETQDSKVR

EYLEQELDCLVKQMETKGEQISKLKKHQATVQ--KLKRKTQKLK--QGAAHVKLKCDDQKKAKEAAVS--VQ

ESMSKSCPGQKSRSSLQLLQNVRKLQSTLKKDDIMWEQ

>XP\_059687604.1/1-471 centrosomal protein CEP57L1 [Gavia stellata]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPASFAYIESK------------KL------AAVGGDR-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKNDTAHQELMQQRKDVTVQ

LNAAQSRCSLLEKQLDYMRKMVSSVELEKKMVLEQQ------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEMLEKECLKLTATQRIAEDKIKHLEEKLREEEHQRKLIQD

KTAQLQAGFEINRILMSSVTSQNKPKKENGKKKKTK-------------------K------RNPTMKKMHL

SPLHVKAGELPFVAG-------K------SVGSS-HSVSANV-QSVLHIMKHRN-P--RVSSRSQGGATS--

-----GIAGHSAFS----KSVSSCSTSP-TATRSLSDLLLTVQDELGQMSFEHQE---LLKQIQDTQDSKVR

EDLEQVLDCLVKQMEIKGEQISKLKNHQATVQ--KLKRKTQKLK--QETAHDKLKCGDKKKAKEIAVT--VR

ESMSKSCPGQKSRSSLQLLKNVQKLQSSLKKDDIMWEK

>KAK4824334.1/1-474 hypothetical protein QYF61\_013669, partial [Mycteria americana]

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------------------------------------------------------------------LFLQ--

-------------------A---------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAV-GDR-PSIPN-------NQ-------

-------AVMAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMFLE-Q------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEMLEKECLKLTATQRIAEDKIKHLEEKFCKEEHQRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKKENGKNKKTK-------------------K------RNPTMKKMHL

SQLRVRAGELPFVAG-------K------SVGSS-HSVSANL-QSVLHIMKHRN-P--RTSSRRQGGATS--

-----GISGRSALS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFEHQE---LLKQIQETQDSKVR

EDLERERDCLVKQMEIKGEQISKLKKHQASVQ--KLKRRTQKLK--QGAAHVRLKCGDQKEAKEIAVT--VR

KSMSKPCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWAQ

>PKU46040.1/1-475 centrosomal protein cep57l1 [Limosa lapponica baueri]

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------------------------------------------------------------------MGKL--

-------------------A---------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-RPAAFAYIESK------------KL------AAVGGDR-PSIPN-------NQ-------

-------AVVAALKTLQEKIRHLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTVHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVFSAELEKKRVLEQQ------------------------------------

-----------AQLQKEEDQNRLELHAKLEKLEMLEKECLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQE

KTAQLQTGFEINRILMSSVTSQNEPKKENRKKKKTK-------------------G-------NPTMKKMHL

SQLHVKAGELPFVAG-------K------SVSCS-HSVSANV-QSVLHIMKHRN-P--RISPRSQGRATS--

-----GISGHSAVS----KSVSSCSTSP-TATRSLSDLLLAIQDELGQMSFKHRE---LLKKIQETQDSKVH

EDLEQELDCLVKQMEIKGEQISKLKKHQAAVQ--KLKRKIQKLK--QGAAHVALKCGDQKKAKEIPVT--VR

KSLSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_032861600.1/1-471 centrosomal protein CEP57L1 [Tyto alba]XP\_032861601.1 centrosomal protein CEP57L1 [Tyto alba]XP\_032861602.1 centrosomal protein CEP57L1 [Tyto alba]XP\_032861603.1 centrosomal protein CEP57L1 [Tyto alba]XP\_032861605.1 centrosomal protein CEP57L1 [Tyto alba]

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-----------------------------------------------MDSESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------TAVGGDR-LSTPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSLAEDNLCSLSIAASQYKKALEHVSYKKDIAHQELMQQRKDISMQ

LNAAQSRCSLLEKQLDYMREMVSSAELEKKMVLEQQ------------------------------------

-----------AQLQKEEDQNRLQLHAKLENLKMLEKECLKLTATRRIAEDKIKHLEENLRKEEHQHKLIQD

KTAQLQTGFQINRILMSSVTSQNEHKKQNRKKKKTK-------------------K------RNPTMKKTHL

SQLHVKAGELPFVAG-------K------SVSSS-HSVSANI-QSVLYIMKHRN-P--RISSRSQGGATS--

-----GISGHSALS----KYVSSCSASP-TTTRSLSDLLLAIQDELDQMSFEHQE---LLKQIQETQDSKVR

EDLERELKSLVKQIEIKGEQISKLKKHQSTVQ--KLKRKTQKMK--QGAAHVKLKCGDQMEAKEIALT--VM

ESMSKSCPGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_028941020.1/1-471 LOW QUALITY PROTEIN: centrosomal protein CEP57L1 [Antrostomus carolinensis]

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-----------------------------------------------MDFESKNSFI----GSFLQPP----

-D-------KM-LPAAFAYIESK------------KL------AAVGGDR-ASIPN-------NQ-------

-------AVMTALKMLQEKIRRLELEKSQAEDNLCSLSIEAARYKKALDHESHKKDTVHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLKQQ------------------------------------

-----------AQFQKEEDQNQLELHAKLEKLEMLEXFCLKLTATQRTAEYKIKQLQEKLCKEELQRKLIQD

KTAQFQTGFEISRILMSSVTSQNEPKKENGKKKKTR-------------------K------RNPPVKKTHL

RQLNVKAGELPFVAG-------K------SVSSS-HSVSANV-QSVLHMMKHRN-P--HTLSRSQGGATS--

-----GISGRSARS----KSVSSCSTSP-TGTRNLSDLLLSIQDELGQMSFEHQE---LLKQIQETQDSRVR

EDLEWELDCLVKQMEIKGEQISKLKKHQATVQ--KLKRKTQKLK--QGEAHVRLKCGDQKEAKEITVA--VR

ESMSKSCPGQKSRSSLQLLKNVRKLQSTLKKDDIMWEQ

>NWU60935.1/1-439 CE57L protein [Pterocles burchelli]

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-----------------------------------------------MDSESKNSFI----GSFRQPP----

-D-------KM-LHAAFASIESK------------KL------AAVGVDR-PSIPD-------NQ-------

-------AVVAALKTLQEKIRHLELEKSQAEDNLCSLSITAAQYKKTLERESHKKDVARQELMQRRKDVSLQ

LSAAQSRCSLLKKQLDYMRKMVSSAELENKMVLEQQ------------------------------------

-----------AQLQKEEDQNCLELHAKLEKLEMLEKECLKLTAAQKIAEDKIKHLEEKLRKAEHQRKLIQD

KTAQLQTGFEISRILMPSITSLNEPKKEN-NNKKTK-------------------K------RNPAMKKVHV

SQLHVKAGELPFVAG-------K--------------VSATS------------------------------

-----GSSGHSALS----KSVSCCSTSP-TATRSLSDLLLARQDELGQMSFEHQE---LLKQIQETQDSKVR

EDLGQELDCLVKQMEIKGEQVSKLKNHQAAVQ--KLKRKTQKLK--QGAAPVKLTRGEQMEAKDIAVT--VR

ESMSKSCPGQKGRSSLQLLKNVQKLQSALKNDYVMWEQ

>NXV77401.1/1-438 CE57L protein [Atlantisia rogersi]

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-----------------------------------------------MDSESKSSFI----GSFLQPP----

-D-------KM-LPAAFDYIESK------------KL------AAVGGDR-PSIPN-------NQ-------

-------AVVAALKTLQEKIRRLELEKSQAEDNLCSLSIAAAQYKKALEHESDKKDTARQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELERKMVLEQQ------------------------------------

-----------AQLQKEEDQNWLELHAKLEKLEMLEKECVKLTATQRIAEDKIKHLEEKLCKEEYRRKLIQD

KTAQLQTGFEINRILMSSVTSQNEPKRENGKDKKTK-------------------K------RNPTVKKVQL

SQLHVKAGELPFVAG-------K------VSATK-HSCQIDI-YR---------------------------

---------RSALP----KSSFS------TSMRSHSDLLLAIQDELGRMSFEYQE---LLKQIEETQDAKVC

EDLEQELDCLVKQMEIKAVQISKLKKHQASVE--KLKSKTQKLK--QGAVRAKLKCSDQKKAKETA----IR

ESMPKCSPEQKSRSSLQLLKTVQKLQSSLKKNDIVWEQ

>XP\_032041083.1/1-467 centrosomal protein CEP57L1 [Aythya fuligula]

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-----------------------------------------------MDSESKDSFI----GSFLQPP----

-D-------KM-IPASFAYIESK------------KL------AAVGVDG-PSISN-------NQ-------

-------AVVAALRTLQEKIHRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDRAHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKIVLEQ-------------------------------------

--------------QKEKDQNQMELHAKLEKLEVLEKECLKLTATQRIAEDKIKHLKEKLSEEEHQHKLLQD

KAAQLQKGFEISRILMSSVSSENECKKKNRKKNKHK-------------------K------KNPTMKKTHP

SQFHVKAGVLPFVAG-------K------SVSSS-HSVSANV-QSVLHIMKHRC-P--RITSQRQDGATS--

-----GISRQTALS----KPVSSCSTSS-TVTGSLSDLLLAIQDERSQMSFEHQE---LLKQIQETQDSKVR

EDLEQKLSCFVKQMNIKEEQISKLKKHQTSVQ--KLKRKTQKLK--QEAAHVKLKYGNQKEAKEIAVT--VR

QSMSKSHAGQKSSSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_027310529.2/1-472 centrosomal protein CEP57L1 isoform X1 [Anas platyrhynchos]XP\_038031749.1 centrosomal protein CEP57L1 isoform X1 [Anas platyrhynchos]XP\_038031750.1 centrosomal protein CEP57L1 isoform X1 [Anas platyrhynchos]XP\_038031751.1 centrosomal protein CEP57L1 isoform X1 [Anas platyrhynchos]

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-----------------------------------------------MDSESKDSFI----GSFLQPP----

-D-------KM-IPASFAYIESK------------KL------AAVGVDE-PSISN-------NQ-------

-------AVVAALRTLQEKIHRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------TQLQKENDQNQVELHAKLEKLEVLEKECLKLTATQRIAEDKIKHLEEKLFEEEHQHKLLQA

KAAQLQKGLEISRILMSSVSSENECKKKNRKKNKPK-------------------KQ-----KNPTVKKMHP

SQFHVKAGVLPFVAG-------K------SVSSS-HSVSANV-QSVLHIMKHRC-P--RITSQRQDGATS--

-----GISGQTALS----KPVPSCSASS-TVTGSLSDLLLAMQDEMSQMSFEHQE---LLKQIQETQDSKVR

EDLEQKLSCLVKQMNIKEEQISKLKKHQTSVQ--KLKRKTQKLK--QEAAHVKQKYGNQKEAKEIAVT--VR

QSMSKSHAGQKSSSSLQLLKNVQKLQSTLKKDDIMWEQ

>XP\_035179083.1/1-470 centrosomal protein CEP57L1 isoform X1 [Oxyura jamaicensis]XP\_035179084.1 centrosomal protein CEP57L1 isoform X1 [Oxyura jamaicensis]XP\_035179085.1 centrosomal protein CEP57L1 isoform X1 [Oxyura jamaicensis]XP\_035179086.1 centrosomal protein CEP57L1 isoform X1 [Oxyura jamaicensis]XP\_035179087.1 centrosomal protein CEP57L1 isoform X1 [Oxyura jamaicensis]

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-----------------------------------------------MDSESKDSFI----GSFLQPP----

-D-------KM-IPASFAYTESK------------KL------AAVGVDG-PSISN-------NQ-------

-------AVVAALRTLQEKIHCLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDITHQELMQQRKDLSVQ

LNAAQSRCSLLEKQLDYMRKMVSSVELEKKMVLEQQ------------------------------------

-----------TQLQK--DQNQVELHAKLEKLEILEKECLKLSATQRIAEDKIKHLEEKLSKEEHQHKLLQD

KATQLQKEFEISRILMSSLSSENECKKKNRKKNKPK-------------------KQ-----KNATMKKTCP

SQFHVKAGVLPFVAG-------K------SVSSS-HSVSANV-QSVLHIMKHRC-P--RITSRRQDGATS--

-----GISGQTALS----KPVLSCSTSS-TVTGSLSDLLLAIQDEMSQMSFEHQE---LLKQIQETQDSKVH

EDLEQKLSCLVKQMNIKEEQISKLKKHQTSVQ--KLKRKTQKLK--QEAAHVKLKYGNQKEAKEITVT--VR

PSMSKSRAGQKSSRSLELLKNVQKLQLTLKEDDIMWEQ

>XP\_035420718.1/1-472 LOW QUALITY PROTEIN: centrosomal protein CEP57L1 [Cygnus atratus]

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-----------------------------------------------MDSESKDSFI----GSFLQPP----

-D-------KM-IPASFAYTESK------------QL------AALGVDM-PSISN-------NQ-------

-------AVVAALRTLQEKIHRLELEKSQAEDNLCSLSIAAAQYKNALEHESYKKDTAHQELMQQRKVISVQ

LNATQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------TQLQKEKDQNQVELHAKLEKLEVLEKECLKLTATQKIAEDKIKHLEEKLSKEEHQHKLIQD

KATQLQKGFEISRISMSSVSSENERKKKKRKKNKPK-------------------KQ-----KNPTMKKTHP

SQFHVKAGVLPFVAG-------K------SVSSS-HSVSANV-QSVLHIMKHRC-P--RITSQRQDGATP--

-----GISGQTALS----KPVSSCSTSS-TVTGNLSDLLLAIQDEMRQRSFEHQE---LLKQIQETQDSKVQ

EDLEQKLSCLVKQMNIKEEQISKLKKHQTSVQ--KLKRKTQKLK--QEAAHVKLKSGNQKEAKEITVT--VR

QSMSKSRAGQKSSSSLQLLKNVQKLQLALKKDDIMWEQ

>XP\_040407568.1/1-474 centrosomal protein CEP57L1 isoform X5 [Cygnus olor]

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-------------------A---------------------------MDSESKDSFI----GSFLQPP----

-D-------KM-IPASFAYTESK------------QL------AALGVDM-PSISN-------NQ-------

-------AVVAALRTLQEKIHRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKVISVQ

LNATQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------TQLQKEKDQNQVELHAKLEKLEVLEKVCLKLTATQKIAEDKIKHLEEKLSKEEHQHKLIQD

KATQLQKGFEISRISMSSVSSENERKKKKRKKNKPK-------------------KQ-----KNPTVKKTHP

SQFHVKAGVLPFVAG-------K------SVSSS-HSVSANV-QSVLHIMKHRC-P--RITSQRQDGATS--

-----GISGQTALS----KPVSSCSTSS-TVTGSLSDLLLAIQDEMSQMSFEHQE---LLKQIQETQDSKVR

EDLEQKLSCLVKQMNIKEEQISKLKKHQTSVQ--KLKRKTQKLK--QEAAHVKLKSGNQKEAKEITVT--VR

QSMSKSRAGQKSSSSLQLLKNVQKLQLALKKDDIMWEQ

>XP\_040407566.1/1-485 centrosomal protein CEP57L1 isoform X3 [Cygnus olor]

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-MYLQF---------------------------------------------------------RVYLEEA--

-------------------A---------------------------MDSESKDSFI----GSFLQPP----

-D-------KM-IPASFAYTESK------------QL------AALGVDM-PSISN-------NQ-------

-------AVVAALRTLQEKIHRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKVISVQ

LNATQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------TQLQKEKDQNQVELHAKLEKLEVLEKVCLKLTATQKIAEDKIKHLEEKLSKEEHQHKLIQD

KATQLQKGFEISRISMSSVSSENERKKKKRKKNKPK-------------------KQ-----KNPTVKKTHP

SQFHVKAGVLPFVAG-------K------SVSSS-HSVSANV-QSVLHIMKHRC-P--RITSQRQDGATS--

-----GISGQTALS----KPVSSCSTSS-TVTGSLSDLLLAIQDEMSQMSFEHQE---LLKQIQETQDSKVR

EDLEQKLSCLVKQMNIKEEQISKLKKHQTSVQ--KLKRKTQKLK--QEAAHVKLKSGNQKEAKEITVT--VR

QSMSKSRAGQKSSSSLQLLKNVQKLQLALKKDDIMWEQ

>XP\_040407564.1/1-506 centrosomal protein CEP57L1 isoform X1 [Cygnus olor]

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----------------------------------------------------MSTPALARWERA--------

--------------------------------------------------------------SEHH-CCSHQ

HRLGQF---------------------------------------------------------QLK-KQR--

-------------------A---------------------------MDSESKDSFI----GSFLQPP----

-D-------KM-IPASFAYTESK------------QL------AALGVDM-PSISN-------NQ-------

-------AVVAALRTLQEKIHRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKVISVQ

LNATQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------TQLQKEKDQNQVELHAKLEKLEVLEKVCLKLTATQKIAEDKIKHLEEKLSKEEHQHKLIQD

KATQLQKGFEISRISMSSVSSENERKKKKRKKNKPK-------------------KQ-----KNPTVKKTHP

SQFHVKAGVLPFVAG-------K------SVSSS-HSVSANV-QSVLHIMKHRC-P--RITSQRQDGATS--

-----GISGQTALS----KPVSSCSTSS-TVTGSLSDLLLAIQDEMSQMSFEHQE---LLKQIQETQDSKVR

EDLEQKLSCLVKQMNIKEEQISKLKKHQTSVQ--KLKRKTQKLK--QEAAHVKLKSGNQKEAKEITVT--VR

QSMSKSRAGQKSSSSLQLLKNVQKLQLALKKDDIMWEQ

>NWZ24584.1/1-439 CE57L protein [Asarcornis scutulata]

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-----------------------------------------------MDSESKDSFI----GSFLQPP----

-D-------KM-IPASFAYIESK------------KL------AAVGVDG-PSISN-------NQ-------

-------AVVAALRTLQEKIHRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDRTHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------TQLQKEKDQNQGELHAKLEKLEVLEKECLKLTATQRIAEDKIKHLKEKLSEEEHQHKLLQD

KAAQLQEGFEISRILMSSVSSENECKMKNRKKNKHK-------------------K------KNPTMKRTHP

SQFHVKAGMLPFVVG-------K------V-------------------------------------PTS--

-----GISRQTALS----KPVSSCSTSS-TVTGSLSDLLLAIQDERSQMSFEHQE---LLKQIQETQDSEVR

EDLEQKLSCLVKQMNIKEEQISKLRKHQTSVQ--KLKRKTQKLK--QEAAHVKLKYGNQKEAKEIAVT--LR

QSMSKSHAGQKSSSSLQLLKNVQKLQSTLKKDDIKWEQ

>EOB03555.1/1-445 Uncharacterized protein C6orf182, partial [Anas platyrhynchos]

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-----------------------------------------------MDSESKDSFI----GSFLQPP----

-D-------KM-IPASFAYIESK------------KL------AAVGVDE-PSISN-------NQ-------

-------AVVAALRTLQEKIHRLELEKSQAEDNLCSLSIAAAQYKKALEHESYKKDTAHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELEKKMVLEQQ------------------------------------

-----------TQLQKENDQNQVELHAKLEKLEVLEKECLKLTATQIIAEDKIKHLEEKLFEEEHQHKLLQA

KAAQLQKGLDISRILMSSVSSENECKKKNRKKNKPK-------------------K------KNPTVKKMHP

SQFHVKAGVLPFVAG-------K------SVSSS-HSVSANV-QR---------------------------

---------QTALS----KPVPSCSASS-TVTGSLSDLLLAMQDEMSQMSFEHQE---LLKQIQETQDSKVR

EDLEQKLSCLVKQMNIKEEQISKLKKHQTSVQ--KLKRKTQKLK--QEAAHVKQKYGNQKEAKEIAVT--VR

QSMSKSHAGQKSSSSLQLLKNVQKLQSTLKKDDIMWEQ

>NXI74358.1/1-445 CE57L protein [Anseranas semipalmata]

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-----------------------------------------------MDSESKDGFI----GSFLQPR----

-D-------KM-IPAPFAYTESK------------NL------AAVGGDG-PSIPN-------NQ-------

-------AVVAALRTLQEKIHRLELERSQAEDNLCSLSIAAAQYKKALEHDSYKKDTAHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMRKMVSSAELENKMFLEQQ------------------------------------

-----------TQLQNEKDQNQVELHAKLEKLEVLEKECLKLTATQRIAEDKIKHLEEKLCKEEHQHKLIQD

KAAQLQTGFEINRILMSSVSSENEPKKKNRKKTKNK-------------------K------KNPAMKKTHL

SQFYVKAGVLPFVAG-------K------SVSSS-HSVSANV-QR---------------------------

---------QAALS----KSVSSCSTSS-TVTRSLSDLLLAIQDELSQMSFEHQE---LLKQIQETQDSKVR

EDLEQKLSCLAKQMDVKGEQISKLKKHQTSVQ--KLKRKTQKLK--QEAAHVKLKYGNQKEAKEITVT--VR

EGMSKSCAGQKSRSSLQLLKNVQKLQSTLKKDDIMWEQ

>NXG31275.1/1-438 CE57L protein [Dromaius novaehollandiae]

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-----------------------------------------------MGSESKHSFI----GSFLQPP----

-D-------KI-LPAAFAYRESK------------KL------TAVGGDRLSPVPS-------NQ-------

-------AVVAALKTLQEKIHRLELERSQAEDNLCSLSAEAALYKKALEQESYRKDISHQELMHQRKDISVQ

LNAAQSRCSLLEKQLDYMKEMVSSAELEKKMVLEQQ------------------------------------

-----------NQLQKEENQNQVELHAKLEKLEVLEKQWLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

QAAQLQTGFEINRILLSLVSSQNESKKKNRKKKKNK-------------------K------KNPTVKKRCL

PQFHVKAGVLPFVAG-------K------VS----------------------------VTKR---------

---------QTIAS----KSVSSYSTSS-TVTRNLSDLLLAIEGELSQMSFEHQE---LLKQIQETHNSEVR

EDLEWELDCLVKKMEIKGEQISKLKKHQASVQ--KIKQKTQKLK--QEAAHVKLKCGDQKETKEIAVA--IR

ESRSKACPGQKSKSSLQLLKNVQKLQSTLKRDDIMWEQ

>NXE51093.1/1-438 CE57L protein [Casuarius casuarius]

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-----------------------------------------------MESESKHSFI----GSFLQPP----

-D-------KI-LPAAFAYRESK------------KL------TAVGGDRLSPVPN-------NQ-------

-------AVVAALKTLQEKIHRLELERSQAEDNLCSLSAEAARYKAALEQESYRKDISHQELMQQRKDISVQ

LNAAQSRCSLLEKQLDYMKEMVSSAELEKKMVLEQQ------------------------------------

-----------NQLQKEKNQNQVELHAKLEKLEVLEKQCLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KAAQLQTGFEINRIFLSLVSSQNESKKKNRKKKKNK-------------------K------KNPTVKKRCL

PQFHVKAGVLPFVAG-------K------VS----------------------------VTKR---------

---------QTIAS----KSVSSYSTSS-TVTRNLSDLLLAIEDELGRMSFEHQE---LLKQIQETHNSEVR

EDLEQELDCLVKKMEIKGEQISKLKNHQPSVQ--KIKQKTQKLK--PEAAHVKLKCGDQKETKEIPVA--IR

ESRSKACPGQKSKSSLQLLKNVQKLQSTLKRDDIMWEQ

>XP\_025975679.1/1-477 centrosomal protein CEP57L1 [Dromaius novaehollandiae]

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------------------------------------------------------------------MGKL--

-------------------A---------------------------MGSESKHSFI----GSFLQPP----

-D-------KI-LPAAFAYRESK------------KL------TAVGGDRLSPVPS-------NQ-------

-------AVVAALKTLQEKIHRLELERSQAEDNLCSLSAEAALYKKALEQESYRKDISHQELMHQRKDISVQ

LNAAQSRCSLLEKQLDYMKEMVSSAELEKKMVLEQQ------------------------------------

-----------NQLQKEENQNQVELHAKLEKLEVLEKQWLKLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

QAAQLQTGFEJNRILLSLVSSQNESKKKNRKKKKNK-------------------K------KNPTVKKRCL

PQFHVKAGVLPFVAG-------K------SASSS-HSVSANV-QSVLHIMKHRN-P--RVSSRGQEGTAS--

-----GISGQTIAS----KSVSSYSTSS-TVTRNLSDLLLAIEGELSQMSFEHQE---LLKQIQETHNSEVR

EDLEWELDCLVKKMEIKGEQISKLKKHQASVQ--KIKQKTQKLK--QEAAHVKLKCGDQKETKEIAVA--IR

ESRSKACPGQKSKSSLQLLKNVQKLQSTLKRDDIMWEQ

>XP\_009675240.1/1-471 PREDICTED: centrosomal protein CEP57L1 [Struthio camelus australis]

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-----------------------------------------------MDSESKHSYI----GSFLQPP----

-D-------KI-LPAAFAHSESK------------KL------TAVDGER-PPILN-------NQ-------

-------AVVAALKTLQEKIRRLELERSQAEDNLCSLSAEAAQYKKALEHESYKKDISHQELMQQRKGVSMQ

LNAAQSRCSLLEKQLDYMKKMVSSAELEKKMILEQQ------------------------------------

-----------TQLQREKNQNRVELHAKLEKLEVLEKQCLKLTATQRIAEDKIKHLEEKLCEEEHQRKLIQE

KAAQLQTGFEINRILLSLASSQNELKKKNRKKKKTK-------------------K------KNPTVKRMYL

PQFNVKAGVLPFVAG-------K------SASSS-HSVSANV-QSVLHIMKHRN-P--PFSSRGQEGAAS--

-----GISGQTVAS----KSVSSFSTIS-TATRNLSDLLLAVEDELGQMSFEHQE---LLRQIQGTHNSEVR

EDLERELDCLVKKMEIKGEQISKLKKHQANVQ--KIKQKTQKLK--QEAAHVKLKCGDQKETKEIPVA--IR

ESRSKACPGQKSKSSLQLLKNVQKLQWTLKRDDIMWEQ

>NXD08238.1/1-455 CE57L protein [Nothocercus nigrocapillus]

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-----------------------------------------------MDFESKYRFI----GSSLQPP----

-D-------KI-LPATFASKEPK------------KL------TAVADDGLSPLPN-------NQ-------

-------AVVSALKTLQEKIRRLELERSQAEDNLCSLSAEAARYKKALEQESYKKDISHQELMQQRKDVSVQ

LNAAQSRCSLLEKQLDYMKKMVASAEMEKKMVLEQQ------------------------------------

-----------TQLQKEKNQNRVELHAKLEKLEVLEKQCLRLTATQRIAEDKIKHLEEKLCKEEHQRKLIQD

KAAQLQTGFEINRILLSLVSSQNERKKKIRKKKTKKHIGISCLFLF-----IL-WN------KNPAVKKICL

LPFHVRAGVLPFVAG-------K-------------------------------------------GAAT--

-----GISRQTTAS----KSVSSCSMSS-TVTRNLSDILLAMQDELGQMSFEHQE---LLKQIQETHNSEVL

EDLEQQLDCLVKKMEIKGEQICKMKKHQASIRKNKIKQKTQKLK--QEAAHIKLKCDDQKETKESQVA--IR

ESKSKACPGQKSKSSLQLLKNAQKLQSTLKKDDIMWER

>XP\_033619328.1/1-326 centrosomal protein CEP57L1 isoform X7 [Fukomys damarensis]

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---------------------------------PKK------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLQEEEHQRKLFQD

KAAELQTGLEISKILMSSVSNSKHSKE---KKKSSK--------------------------KSKCLKKGPP

LQIYSKFRAPLFEAK-------K------SASAG-CSVNAGR-QSLQHKTYHCS-P--HGFPKGTQVIEPRC

LCK----PPRT-IS-QY-KAVPRESEKSISICDNLSELLMAMQDELDQMSMEHEE---LLKQMKETESHSIC

DNIEYELERLVKKMEIKEKQISKLKTHQDNVH--KLQQKVQNSKT-SKASGIQQDSN--QSLKSMKNS--PR

KCLNKANSSQK-SSNFHPIQ-VHNIQVKLRRDDITWEQ

>XP\_015352762.2/1-337 centrosomal protein CEP57L1 [Marmota marmota marmota]

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--------------------MVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDQLKLHAKLEKLDVLEKECFRLTTTQKTAEDKIKHLEEKLTEEEHQRKLFQD

KASELQTGLEISKILMSSVSKSKLSKE---KKKSSK--------------------------KTKSLKRGPT

QQIYSKLRELPFEAE-------K------SAA---SSANGSM-YSLLKMMRHCS-Q--CSLQKP-EVTEPRC

LYR----PTRK-TS-QY-KAVPQDSEKSISICDNLSELLMAMQDELDQMSMEHEE---LLKQMKETESHSVC

DDIECELEHLVKKMEIKGEQISKLRKHQDNVY--KLQQKVQNSKMLSNTSVIQQEDSNLKGSKNIKNS--PR

KCLNETNPFQK-NNNFHPVQ-VHNLQMKLRRDDIMWEQ

>OWK01436.1/1-359 CEP57L1 [Cervus elaphus hippelaphus]

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LSSAQSRCILLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMRLHAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEINRILMSSVTNPRHFKE---KKKSSK--------------------------KTKCLRRGPS

QQICSKFGTLPIVAE-------K------SASAS-HSANAST-QN-LQTVPHYG-P--HILQKPAEVTELRC

LYK----PSRT-TS-QC-KAVPSDSEKSISICNNLSELLMAMQDELDQMTMEYQD---LLNQMKETESQSVC

EDIECELERLVKKMEIKGEQISKLMQHQDSVR--KLQQKVQNSKM-SETSALQQEDGNCKGTKNIKNS--SR

KCLLTNS-LQK-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>XP\_047618335.1/1-369 centrosomal protein CEP57L1 isoform X5 [Phacochoerus africanus]

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-----------------------------------------------MDSVSLY------------------

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--------------------------------------------------------------------ISMQ

LSSAQSRCTLLEKQLEYTKRMVLNVEREKDMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEDKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLAINRILMASVSNPKCSKE---KKKSSK--------------------------KTKCLKRGPP

QQIYSKFGSLPVVAE-------K------SASAS-HSVNAST-QNLLQTMQHYG-P--HILQKPAKVIEPRY

LYK----PSRT-TS-QC-KAVPSDSEKSISICDNLSELLMAMQDELDQMSIEYQE---LLSQMKETESQSVC

EDIECELEHLVKKMEIKGERISKLMKHQDSVR--KLQQKVQSSKM-SEASAIQQQDSNLKGSKNIKNS--PR

KCLLTNS-LQK-NSSFHPIR-VHNLQMKLRRDDILWEQ

>XP\_007447338.1/1-321 PREDICTED: centrosomal protein CEP57L1 [Lipotes vexillifer]

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-----------------------------------------------MDSELMHSIV----GSYLKPP----

-E-------RV-LVPSITQSDES-----SQTHY--SV-----NLEVTSPKMLHSPN-------SQ-------

-------ALILALKTLQEKIHRLELERTQAEDNLNILSREAAQYKKALEDERKERNLAHEELIKQKKDISMQ

LSSAQSHCTLLEKQLEYTKRMVLNVEREKNMILEQQ------------------------------------

-----------AQLQREKEQDHMKLQAKLEKLDVLEKECFKLTTTQKTAEGKIKHLEEKLKEEEHQRKLFQD

KASQLQTGLEISRILMSSVSNPKRSKE---KKKSSK------------------------------------

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------------------------------VR--KLQQKVQNLKM-SEASAIQKEDSNCKGSKNIKNS--PR

KYLLTNS-PQK-NSNFRPIR-VHNLQMKLRRDDIMWEQ

>XP\_052020244.1/1-584 centrosomal protein CEP57L1 isoform X1 [Apodemus sylvaticus]

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---------------------------------------------------MLLLLLCPRPPPPSQRAPRDP

AVIEPRAAPLKHRAPSTEPAPSP-SPVCGDRPRGREQGGETGSSPPAPPLSPPGTAGSRPC-PMPA--SPPR

-----HTR-PAKTAIGSSPALGQSTSGPR---VQCA--------------------PPIKAGCCACA-----

-------------------TPSRAHALSAALSVLDVWRRWLEGEGKTMDSELSHSMV----GSYLNPP----

-E-------RM-YLPSFTQNEAF------QNHH--LG-----NS----PKMFNSPN-------NQ-------

-------ALVSALKTLQEKIHRLELERTQAEDNLNLLSREAAQYKKALEEETTERDLAHEELIKQKKDISIQ

LSSAQSRCILLEKQLEYTKRMVLNVEREKTMILEQQ------------------------------------

-----------AQLQREKEQDQMKLHAKLEKLHVLEKECLRLTATQQTAEDKIKYLEEKLKEEEHQRRLFQD

KACELQTGFEISKILMSTVSNSKHCKE---KKKLPK--------------------------KTNCLKREPP

QQMDHKFRVPTFEK----------------------------------------------------------

-EK----PFRA-TS-QA-RANAHSSGEPVSICDSLSELLMTMQEELAQMNMEHRE---LLRQMMQTESHSVS

EDIELELEQLVKKMESKGDQISKLKKHQDSVR--KLQEKVENSRI-NESSGLH---GHPKGSKNLKTS--PR

KCVSETSAFQR-DSSFQPVQ-VHSLQAKLRRDDIKWEQ