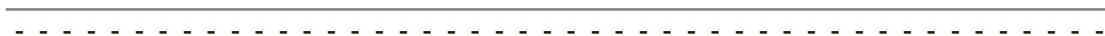


SARS-CoV-2-Wuhan-Hu-1_spike/1-1273 MFVFLVLLPLVSSQCVNLTTRTQLPPAYTNSFTRGVYYPDKVFRSS
 S-epi1/1-39 - - - - -
 S-epi2/1-34 - - - - -

Conservation



Quality



Consensus



MFVFLVLLPLVSSQCVNL TTRTQLPPAYTNSFTRGVYYPDKVFRSS

Occupancy



SARS-CoV-2-Wuhan-Hu-1_spike/1-1273 VLHSTQDLFLPFFSNVTWFHAIHVS GTNGTKRFDNPVLPFNDGVYF
 S-epi1/1-39 - - - - -
 S-epi2/1-34 - - - - -

Conservation



Quality



Consensus



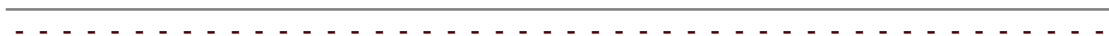
VLHSTQDLFLPFFSNVTWFHAIHVSGTNGTKRFDNPVLPFNDGVYF

Occupancy



SARS-CoV-2-Wuhan-Hu-1_spike/1-1273 A S T E K S N I I R G W I F G T T L D S K T Q S L L I V N N A T N V V I K V C E F Q F C N D
S-epi1/1-39 - - - - -
S-epi2/1-34 - - - - -

Conservation



Quality



Consensus

██
 ASTEKSNIIRGWIFGTTLDSKTQSLLIVNNATNVVIVKVC EFQFCND

Occupancy



	140F	150K	160Y	170Y	180E
SARS-CoV-2-Wuhan-Hu-1_spike/1-1273	P F L G V Y Y H K N N K S W M E S E F R V Y S S A N N C T F E Y V S Q P F L M D L E G K Q G				
<i>S-epi1/1-39</i>	- - - - -				
<i>S-epi2/1-34</i>	- - - - -				

Conservation

Quality

Consensus

Occupancy

SARS-CoV-2-Wuhan-Hu-1_spike/1-1273

N F K N L R E F V F K N I D G Y F K I Y S K H T P I N L V R D L P Q G F S A L E P L V D L P

S-epi1/1-39

- - - - -

S-epi2/1-34

- - - - -

Conservation



Quality



Consensus

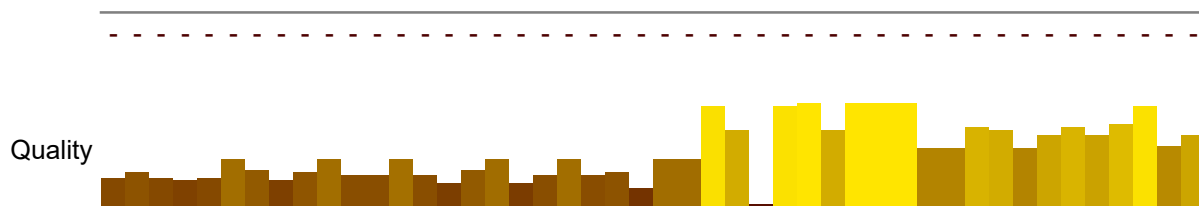


Occupancy



[illegible]

Conservation




Consensus

IGINITRFQTLALHRSYLT PGDSSSGWTAGAAAYYVGYLQPRTF

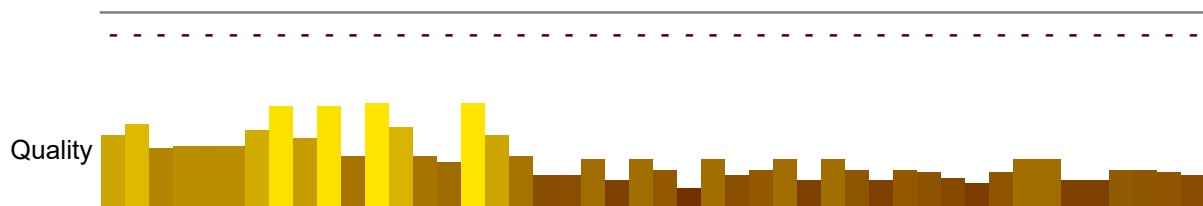
Occupancy





	280N	290D	300K	310K	320V
SARS-CoV-2-Wuhan-Hu-1_spike/1-1273	L KYNENGTITDAVDCALD	PLSETKCTLKSFTVEKGIYQTSNFRVQP			
<i>S-epi1/1-39</i>	L KYNENGTITDAVDCALD	- - - - -			
<i>S-epi2/1-34</i>	- - - - -	- - - - -			

Conservation



Consensus

L KYNENGT I TDAVDCAL DPL SETKCTL KSFTVEKG I YQTSNFRVQP

Occupancy



SARS-CoV-2-Wuhan-Hu-1_spike/1-1273 T E S I V R F P N I T N L C P F G E V F N A T R F A S V Y A W N R K R I S N C V A D Y S V L
S-epi1/1-39 - - - - -
S-epi2/1-34 - - - - -

Conservation



Quality



Consensus

TESIVRFPNITNLCPFGEVFNATRFASVYAWNRKRISNCVADYSVL

Occupancy



SARS-CoV-2-Wuhan-Hu-1_spike/1-1273

S-epi1/1-39

S-epi2/1-34

Conservation



Quality



Consensus



YNSASFSTFKCYGVSP TKLNDLCFTNVYADSFVIRGDEV RQIAPGQ

Occupancy



SARS-CoV-2-Wuhan-Hu-1_spike/1-1273

T G K I A D Y N Y K L P D D F T G C V I A W N S N N L D S K V G G N Y N Y L Y R L F R K S N

S-epi1/1-39

- - - - -

S-epi2/1-34

- - - - -

Conservation



Quality

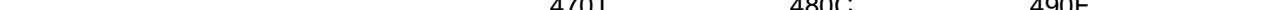


Consensus

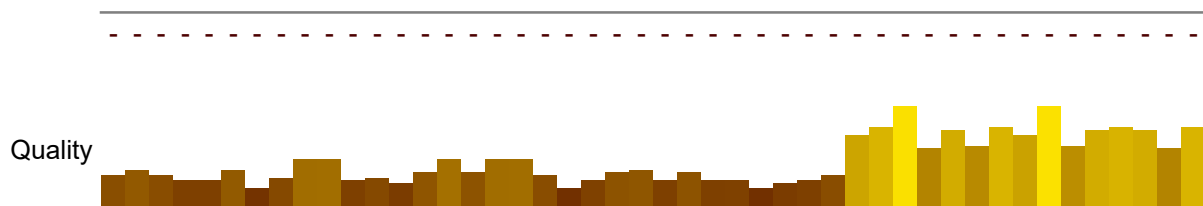
TGKIADYNYKL PDDFTGCVIAWNSNNLDSKVGGNYNYLYRLFRKSN

Occupancy





Conservation



Consensus

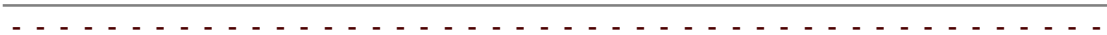
L K P F E R D I S T E I Y Q A G S T P C N G V E G F N C Y F P L Q S Y G F Q P T N G V G Y Q

Occupancy

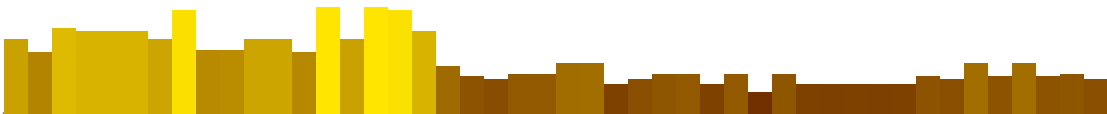


SARS-CoV-2-Wuhan-Hu-1_spike/1-1273 510V 520A 530S 540N 550G
S-epi1/1-39 - - - - -
S-epi2/1-34 PYRVVVL SFELL HAPATVC - - - - -

Conservation



Quality



Consensus



Occupancy



SARS-CoV-2-Wuhan-Hu-1_spike/1-1273

T E S N K K F L P F Q Q F G R D I A D T T D A V R D P Q T L E I L D I T P C S F G G V S V I

S-epi1/1-39

- - - - -

S-epi2/1-34

- - - - -

Conservation



Quality



Consensus

TESNKKFLPFQQFGRDIADTTDAVRDPQTLEILDITPCSFGGVSVI

Occupancy



SARS-CoV-2-Wuhan-Hu-1_spike/1-1273

T P G T N T S N Q V A V L Y Q D V N C T E V P V A I H A D Q L T P T W R V Y S T G S N V F Q

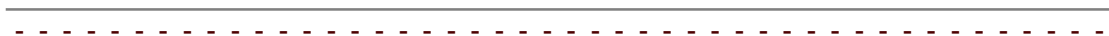
S-epi1/1-39

- - - - -

S-epi2/1-34

- - - - -

Conservation



Quality



Consensus

TPGTNTSNQVAVLYQDVNCTEVPVAIHADQLTPTWRVYSTGSNVFQ

Occupancy



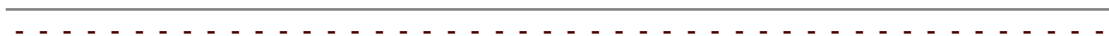
|
|
650L
|
660Y
|
670I
|
680S
|

SARS-CoV-2-Wuhan-Hu-1_spike/1-1273
T R A G C L I G A E H V N N S Y E C D I P I G A G I C A S Y Q T Q T N S P R R A R S V A S Q

S-epi1/1-39
- - - - -

S-epi2/1-34
- - - - -

Conservation



Quality



Consensus



TRAGCLIGAEHVNNSECDIPIGAGICASYQTQTNSPRRRARSVASQ

Occupancy



Sequence	700G	710N	720I	730S
SARS-CoV-2-Wuhan-Hu-1_spike/1-1273	S	I	A	I
S-epi1/1-39	-	-	-	-
S-epi2/1-34	-	-	-	-

Conservation



Quality



Consensus

S I I A Y T M S L G A E N S V A Y S N N S I A I P T N F T I S V T T E I L P V S M T K T S V

Occupancy



SARS-CoV-2-Wuhan-Hu-1_spike/1-1273

DCTMYICGDSTEC SNLLQYGSFCTQLNRALTGIAVEQDKNTQE VF

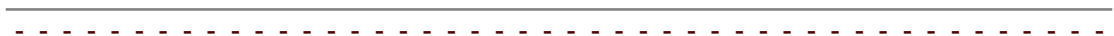
S-epi1/1-39

- - - - -

S-epi2/1-34

- - - - -

Conservation



Quality



Consensus



Occupancy



SARS-CoV-2-Wuhan-Hu-1_spike/1-1273

AQVKQ I YKTPP I KDFGGFNFSQ I L PDP SKPSKR S F I EDLLFNKVTL

S-epi1/1-39

- - - - -

S-epi2/1-34

- - - - -

Conservation



Quality



Consensus

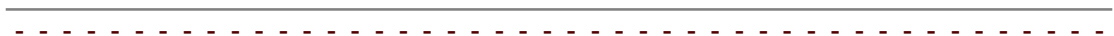


AQVKQ I YKTPP I KDFGGF NF SQ I L PDPSKPSKRSF I EDLL FNKVTL

Occupancy



Conservation



Quality



Consensus

ADAGF I KQYGDCLGDI AARDL I CAQKFNGLT VLPPL LTDEMI AQYT

Occupancy



SARS-CoV-2-Wuhan-Hu-1_spike/1-1273

S-epi1/1-39

S-epi2/1-34

Conservation



Consensus

SALLAGTITSGWTFGAGAALQIPFAMQMAYRFNGIGVTQNVLYENQ

Occupancy



	930A	940S	950D	960N
SARS-CoV-2-Wuhan-Hu-1_spike/1-1273	KL I ANQF NSA I GK I QDSL S STASALGKLQDVVNQNAQALNTLVKQL			
<i>S-epi1/1-39</i>	- - - - -			
<i>S-epi2/1-34</i>	- - - - -			

Conservation



Quality



Consensus



KL I ANQFNSA I GK I QDSL SSTASALGKLQDVVNQNAQALNTLVKQL

Occupancy



Conservation



Quality



Consensus



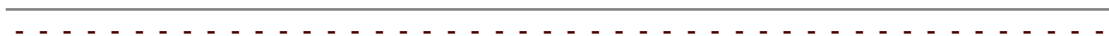
SSNFGA I SSVL ND I L SRL DKVEAEVQ I DRL I TGRL QSL QTYVTQQL

Occupancy



SARS-CoV-2-Wuhan-Hu-1_spike/1-1273 I R A A E I R A S A N L A A T K M S E C V L G Q S K R V D F C G K G Y H L M S F P Q S A P H
S-epi1/1-39 - - - - -
S-epi2/1-34 - - - - -

Conservation



Quality



Consensus



Occupancy



SARS-CoV-2-Wuhan-Hu-1_spike/1-1273

G V V F L H V T Y V P A Q E K N F T T A P A I C H D G K A H F P R E G V F V S N G T H W F V

S-epi1/1-39

- - - - -

S-epi2/1-34

- - - - -

Conservation



Quality



Consensus

GVVFLHVTYVPAQEKNFTTAPAICHDGKAHFPREGVFVSNGTHWVF

Occupancy



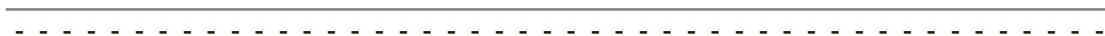
|
|
1110Y
|
1120T
|
1130I
|
1140P
|

SARS-CoV-2-Wuhan-Hu-1_spike/1-1273 TQRNFYEPQ I I TTDNTFVSGNCDVV I G I VNNNTVYDPLQPELDSFKE

S-epi1/1-39 - - - - -

S-epi2/1-34 - - - - -

Conservation



Quality



Consensus



TQRNFYEPQ I I TTDNTFVSGNCDVV I G I VNNTVYDPLQPELDSFKE

Occupancy



1160T
1170S
1180Q
1190A

SARS-CoV-2-Wuhan-Hu-1_spike/1-1273 ELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNEVAKNLNES

S-epi1/1-39 - - - - -

S-epi2/1-34 - - - - -

Conservation



Quality



Consensus

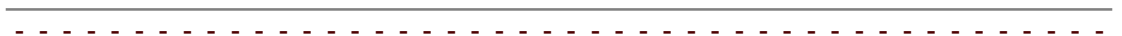


ELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNEVAKNLES

Occupancy



Conservation



Quality



Consensus



Occupancy



SARS-CoV-2-Wuhan-Hu-1_spike/1-1273 CLKGCCSCGSCCKFDEDDSEPV LKGVKLHYT
S-epi1/1-39 - - - - - - - - - - - - - - - - - -
S-epi2/1-34 - - - - - - - - - - - - - - - - - -

Conservation



Quality



Consensus

[illegible]

Occupancy

