**Table S1: Differentially regulated genes of dromedary camels following ChAdOx1-MERS vaccination.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Gene name(CamDro3 names) | Gene name(mapped toENSEMBL human) | Genename(InterPro) | Gene name(humanReadable) | Gene description | T=6h | T=12h | T=24h |
| **LFC** | **FDR** | **LFC** | **FDR** | **LFC** | **FDR** |
| Cadr\_000009117 | ENSG00000168209 | Q9NX09 | DDIT4 | DNA damage-inducible transcript 4 protein | -2.57 | 0.0021 | -2.84 | 0.00078 | -2.94 | 0.00056 |
| Cadr\_000028639 | ENSG00000156052 | P50148 | GNAQ | Guanine nucleotide-binding protein G subunit alpha | 1.08 | 0.023 | 0.656 | 0.094 | 0.261 | 0.91 |
| Cadr\_000010587 | ENSG00000146477 | O75751 | SLC22A3 | Solute carrier family 22 member 3 | 2.2 | 0.041 | 0.538 | 0.68 | 0.182 | 1 |
| Cadr\_000012219 | ENSG00000186818 | Q8NHJ6 | LILRB4 | Leukocyte immunoglobulin-like receptor subfamily B member 4 | 1.61 | 0.028 | 0.934 | 0.12 | 0.186 | 0.99 |
| Cadr\_000021957 | ENSG00000096060 | Q13451 | FKBP5 | Peptidyl-prolyl cis-trans isomerase FKBP5 | -2.45 | 0.023 | -2.16 | 0.054 | -2.25 | 0.078 |
| Cadr\_000004067 | ENSG00000168685 | P16871 | IL7R | Interleukin-7 receptor subunit alpha | -1.51 | 0.041 | -1.16 | 0.073 | -1.2 | 0.19 |
| Cadr\_000023477 | ENSG00000133055 | Q13203 | MYBPH | Myosin-binding protein H | 2.07 | 0.023 | 1.59 | 0.056 | 0.541 | 0.85 |
| Cadr\_000003390 | ENSG00000102312 | Q9H237 | PORCN | Protein-serine O-palmitoleoyltransferase porcupine | 2.24 | 0.023 | 0.358 | 0.79 | -0.36 | 0.98 |
| Cadr\_000015194 | ENSG00000110195 | P15328 | FOLR1 | Folate receptor alpha | 3.16 | 0.028 | 1.4 | 0.22 | 0.448 | 0.98 |
| Cadr\_000013472 | ENSG00000175793 | P31947 | SFN | 14-3-3 protein sigma | 1.36 | 0.043 | 0.573 | 0.37 | 0.251 | 0.98 |
| Cadr\_000001890 | ENSG00000163739 | P09341 | CXCL1 | Growth-regulated alpha protein | -3.21 | 0.07 | -5.61 | 0.041 | -5.17 | 0.05 |
| Cadr\_000013576 | ENSG00000116514 | Q6ZMZ0 | RNF19B | E3 ubiquitin-protein ligase RNF19B | 0.988 | 0.17 | 2.22 | 0.045 | 0.959 | 0.44 |
| Cadr\_000018634 | ENSG00000179094 | O15534 | PER1 | Period circadian protein homolog 1 | -1.58 | 0.013 | -1.76 | 0.015 | -1.96 | 0.005 |
| Cadr\_000023115 | ENSG00000090104 | Q08116 | RGS1 | Regulator of G-protein signaling 1 | -2.85 | 0.023 | -0.514 | 0.73 | -0.943 | 0.68 |
| Cadr\_000016314 | ENSG00000175287 | Q5SRE7 | PHYHD1 | Phytanoyl-CoA dioxygenase domain-containing protein 1 | 1.88 | 0.041 | 1.06 | 0.16 | -0.921 | 0.49 |
| Cadr\_000028656 | ENSG00000128789 | Q969U7 | PSMG2 | Proteasome assembly chaperone 2 | 1.06 | 0.013 | 0.689 | 0.059 | 0.0823 | 0.99 |
| Cadr\_000019826 | ENSG00000092929 | Q70J99 | UNC13D | Protein unc-13 homolog D | 1.22 | 0.036 | 0.616 | 0.2 | -0.0201 | 1 |
| Cadr\_000027936 | ENSG00000130783 | Q6P9F0 | CCDC62 | Coiled-coil domain-containing protein 62 | 1.31 | 0.041 | 0.899 | 0.096 | 0.734 | 0.41 |
| Cadr\_000012282 | ENSG00000167685 | Q8N0Y2 | ZNF444 | Zinc finger protein 444 | 1.71 | 0.042 | 0.93 | 0.19 | 0.0416 | 1 |
| Cadr\_000028624 | ENSG00000168454 | Q86VQ3 | TXNDC2 | Thioredoxin domain-containing protein 2 | 2.18 | 0.041 | 1.9 | 0.057 | 1.29 | 0.36 |
| Cadr\_000028245 | ENSG00000182541 | P53671 | LIMK2 | LIM domain kinase 2 | 2.47 | 0.0072 | 1.31 | 0.063 | 0.228 | 0.99 |
| Cadr\_000026275 | ENSG00000179361 | Q8IVW6 | ARID3B | AT-rich interactive domain-containing protein 3B | 1.13 | 0.027 | 0.315 | 0.56 | 0.166 | 0.98 |
| Cadr\_000002514 | ENSG00000198883 | Q96PV4 | PNMA5 | Paraneoplastic antigen-like protein 5 | 3.89 | 0.023 | 0.915 | 0.61 | -0.0643 | 1 |
| Cadr\_000004852 | ENSG00000133710 | Q9NQ38 | SPINK5 | Serine protease inhibitor Kazal-type 5 | 5.88 | 0.023 | 5.44 | 0.054 | 5.76 | 0.061 |
| Cadr\_000016797 | ENSG00000205420 | P02538 | KRT6A | Keratin, type II cytoskeletal 6A | 5.96 | 0.053 | 6.65 | 0.054 | 7.47 | 0.047 |
| Cadr\_000016800 | ENSG00000205420 | P02538 | KRT6A | Keratin, type II cytoskeletal 6A | 5.61 | 0.058 | 6.51 | 0.054 | 7.61 | 0.041 |
| Cadr\_000012112 | ENSG00000129450 | Q9Y336 | SIGLEC9 | Sialic acid-binding Ig-like lectin 9 | 1.76 | 0.041 | 1.33 | 0.073 | 0.564 | 0.81 |
| Cadr\_000012111 | ENSG00000142512 | Q96LC7 | SIGLEC10 | Sialic acid-binding Ig-like lectin 10 | 1.29 | 0.041 | 1.08 | 0.063 | 0.404 | 0.84 |
| Cadr\_000016822 | ENSG00000167767 | Q6KB66 | KRT80 | Keratin, type II cytoskeletal 80 | 3.9 | 0.034 | 2.63 | 0.086 | 3.84 | 0.078 |
| Cadr\_000022112 | ENSG00000204539 | Q15517 | CDSN | Corneodesmosin | 7.49 | 0.0052 | 5.91 | 0.035 | 7.2 | 0.0053 |
| Cadr\_000001885 | ENSG00000169429 | P10145 | CXCL8 | Interleukin-8 | -1.8 | 0.023 | -2.01 | 0.028 | -2.08 | 0.015 |
| Cadr\_000029654 | ENSG00000147454 | Q9NYZ2 | SLC25A37 | Mitoferrin-1 | 1.87 | 0.041 | 1.8 | 0.054 | 0.816 | 0.58 |
| Cadr\_000025199 | ENSG00000214456 | Q00G26 | PLIN5 | Perilipin-5 | 2.84 | 0.048 | 0.845 | 0.6 | 0.586 | 0.97 |
| Cadr\_000002580 |  |  |  | hypothetical protein | 1.65 | 0.041 | 0.922 | 0.18 | -0.104 | 1 |
| Cadr\_000007726 |  |  |  | hypothetical protein | 1.47 | 0.028 | 0.717 | 0.2 | 0.72 | 0.43 |
| Cadr\_000011353 |  |  |  |  | 1.52 | 0.017 | 0.455 | 0.42 | -0.181 | 0.98 |
| Cadr\_000023835 |  |  |  |  | 1.47 | 0.023 | 0.875 | 0.097 | 0.208 | 0.98 |
| Cadr\_000005463 |  |  |  |  | 2.23 | 0.013 | 1.87 | 0.054 | 0.237 | 0.99 |
| Cadr\_000025074 |  |  |  |  | 1.12 | 0.05 | 0.453 | 0.42 | 0.0936 | 1 |
| Cadr\_000011526 | ENSG00000089351 | Q96CP6 | GRAMD1A | Protein Aster-A | 1.54 | 0.013 | 0.845 | 0.072 | -0.0587 | 1 |
| Cadr\_000030773 | ENSG00000008516 | Q9NPA2 | MMP25 | Matrix metalloproteinase-25 | 1.87 | 0.034 | 0.99 | 0.17 | -0.00766 | 1 |
| Cadr\_000010146 | ENSG00000135587 | O60906 | SMPD2 | Sphingomyelin phosphodiesterase 2 | 1.33 | 0.023 | 0.583 | 0.22 | 0.227 | 0.97 |
| Cadr\_000011846 | ENSG00000069399 | P20749 | BCL3 | B-cell lymphoma 3 protein | 1.19 | 0.023 | 0.688 | 0.096 | 0.0744 | 1 |
| Cadr\_000009001 | ENSG00000276430 | B3EWG5 | FAM25C | Protein FAM25C | 4.83 | 0.047 | 4.08 | 0.065 | 4.95 | 0.096 |
| Cadr\_000015197 | ENSG00000165458 | O15357 | INPPL1 | Phosphatidylinositol 3,4,5-trisphosphate 5-phosphatase 2 | 1.01 | 0.043 | 0.477 | 0.29 | 0.233 | 0.96 |
| Cadr\_000000564 | ENSG00000113916 | P41182 | BCL6 | B-cell lymphoma 6 protein | 1.98 | 0.041 | 1.34 | 0.092 | 0.269 | 0.99 |
| Cadr\_000025545 | ENSG00000186723 | Q9Y4A9 | OR10H1 | Olfactory receptor 10H1 | 2.74 | 0.041 | 0.248 | 0.91 | 0.416 | 0.98 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Gene name(CamDro3 names) | Gene name(mapped toENSEMBL human) | Genename(InterPro) | Gene name(humanReadable) | Gene description | T=6h | T=12h | T=24h |
| **LFC** | **FDR** | **LFC** | **FDR** | **LFC** | **FDR** |
| Cadr\_000009117 | ENSG00000168209 | Q9NX09 | DDIT4 | DNA damage-inducible transcript 4 protein | -2.57 | **0.0021** | -2.84 | **0.00078** | -2.94 | **0.00056** |
| Cadr\_000018634 | ENSG00000179094 | O15534 | PER1 | Period circadian protein homolog 1 | -1.58 | **0.013** | -1.76 | **0.015** | -1.96 | **0.005** |
| Cadr\_000022112 | ENSG00000204539 | Q15517 | CDSN | Corneodesmosin | 7.49 | **0.0052** | 5.91 | **0.035** | 7.2 | **0.0053** |
| Cadr\_000028245 | ENSG00000182541 | P53671 | LIMK2 | LIM domain kinase 2 | 2.47 | **0.0072** | 1.31 | 0.063 | 0.228 | 0.99 |
| Cadr\_000005463 |  |  |  |  | 2.23 | **0.013** | 1.87 | 0.054 | 0.237 | 0.99 |
| Cadr\_000011526 | ENSG00000089351 | Q96CP6 | GRAMD1A | Protein Aster-A | 1.54 | **0.013** | 0.845 | 0.072 | -0.0587 | 1 |
| Cadr\_000028656 | ENSG00000128789 | Q969U7 | PSMG2 | Proteasome assembly chaperone 2 | 1.06 | **0.013** | 0.689 | 0.059 | 0.0823 | 0.99 |
| Cadr\_000001885 | ENSG00000169429 | P10145 | CXCL8 | Interleukin-8 | -1.8 | **0.023** | -2.01 | **0.028** | -2.08 | **0.015** |
| Cadr\_000011353 |  |  |  |  | 1.52 | **0.017** | 0.455 | 0.42 | -0.181 | 0.98 |
| Cadr\_000002514 | ENSG00000198883 | Q96PV4 | PNMA5 | Paraneoplastic antigen-like protein 5 | 3.89 | **0.023** | 0.915 | 0.61 | -0.0643 | 1 |
| Cadr\_000003390 | ENSG00000102312 | Q9H237 | PORCN | Protein-serine O-palmitoleoyltransferase porcupine | 2.24 | **0.023** | 0.358 | 0.79 | -0.36 | 0.98 |
| Cadr\_000004852 | ENSG00000133710 | Q9NQ38 | SPINK5 | Serine protease inhibitor Kazal-type 5 | 5.88 | **0.023** | 5.44 | 0.054 | 5.76 | 0.061 |
| Cadr\_000010146 | ENSG00000135587 | O60906 | SMPD2 | Sphingomyelin phosphodiesterase 2 | 1.33 | **0.023** | 0.583 | 0.22 | 0.227 | 0.97 |
| Cadr\_000011846 | ENSG00000069399 | P20749 | BCL3 | B-cell lymphoma 3 protein | 1.19 | **0.023** | 0.688 | 0.096 | 0.0744 | 1 |
| Cadr\_000021957 | ENSG00000096060 | Q13451 | FKBP5 | Peptidyl-prolyl cis-trans isomerase FKBP5 | -2.45 | **0.023** | -2.16 | 0.054 | -2.25 | 0.078 |
| Cadr\_000023115 | ENSG00000090104 | Q08116 | RGS1 | Regulator of G-protein signaling 1 | -2.85 | **0.023** | -0.514 | 0.73 | -0.943 | 0.68 |
| Cadr\_000023477 | ENSG00000133055 | Q13203 | MYBPH | Myosin-binding protein H | 2.07 | **0.023** | 1.59 | 0.056 | 0.541 | 0.85 |
| Cadr\_000023835 |  |  |  |  | 1.47 | **0.023** | 0.875 | 0.097 | 0.208 | 0.98 |
| Cadr\_000028639 | ENSG00000156052 | P50148 | GNAQ | Guanine nucleotide-binding protein G subunit alpha | 1.08 | **0.023** | 0.656 | 0.094 | 0.261 | 0.91 |
| Cadr\_000026275 | ENSG00000179361 | Q8IVW6 | ARID3B | AT-rich interactive domain-containing protein 3B | 1.13 | **0.027** | 0.315 | 0.56 | 0.166 | 0.98 |
| Cadr\_000007726 |  |  |  | hypothetical protein | 1.47 | **0.028** | 0.717 | 0.2 | 0.72 | 0.43 |
| Cadr\_000012219 | ENSG00000186818 | Q8NHJ6 | LILRB4 | Leukocyte immunoglobulin-like receptor subfamily B member 4 | 1.61 | **0.028** | 0.934 | 0.12 | 0.186 | 0.99 |
| Cadr\_000015194 | ENSG00000110195 | P15328 | FOLR1 | Folate receptor alpha | 3.16 | **0.028** | 1.4 | 0.22 | 0.448 | 0.98 |
| Cadr\_000016822 | ENSG00000167767 | Q6KB66 | KRT80 | Keratin, type II cytoskeletal 80 | 3.9 | **0.034** | 2.63 | 0.086 | 3.84 | 0.078 |
| Cadr\_000030773 | ENSG00000008516 | Q9NPA2 | MMP25 | Matrix metalloproteinase-25 | 1.87 | **0.034** | 0.99 | 0.17 | -0.00766 | 1 |
| Cadr\_000019826 | ENSG00000092929 | Q70J99 | UNC13D | Protein unc-13 homolog D | 1.22 | **0.036** | 0.616 | 0.2 | -0.0201 | 1 |
| Cadr\_000000564 | ENSG00000113916 | P41182 | BCL6 | B-cell lymphoma 6 protein | 1.98 | **0.041** | 1.34 | 0.092 | 0.269 | 0.99 |
| Cadr\_000001890 | ENSG00000163739 | P09341 | CXCL1 | Growth-regulated alpha protein | -3.21 | **0.07** | -5.61 | **0.041** | -5.17 | **0.05** |
| Cadr\_000002580 |  |  |  | hypothetical protein | 1.65 | **0.041** | 0.922 | 0.18 | -0.104 | 1 |
| Cadr\_000004067 | ENSG00000168685 | P16871 | IL7R | Interleukin-7 receptor subunit alpha | -1.51 | **0.041** | -1.16 | 0.073 | -1.2 | 0.19 |
| Cadr\_000010587 | ENSG00000146477 | O75751 | SLC22A3 | Solute carrier family 22 member 3 | 2.2 | **0.041** | 0.538 | 0.68 | 0.182 | 1 |
| Cadr\_000012111 | ENSG00000142512 | Q96LC7 | SIGLEC10 | Sialic acid-binding Ig-like lectin 10 | 1.29 | **0.041** | 1.08 | 0.063 | 0.404 | 0.84 |
| Cadr\_000012112 | ENSG00000129450 | Q9Y336 | SIGLEC9 | Sialic acid-binding Ig-like lectin 9 | 1.76 | **0.041** | 1.33 | 0.073 | 0.564 | 0.81 |
| Cadr\_000016314 | ENSG00000175287 | Q5SRE7 | PHYHD1 | Phytanoyl-CoA dioxygenase domain-containing protein 1 | 1.88 | **0.041** | 1.06 | 0.16 | -0.921 | 0.49 |
| Cadr\_000016800 | ENSG00000205420 | P02538 | KRT6A | Keratin, type II cytoskeletal 6A | 5.61 | 0.058 | 6.51 | 0.054 | 7.61 | **0.041** |
| Cadr\_000025545 | ENSG00000186723 | Q9Y4A9 | OR10H1 | Olfactory receptor 10H1 | 2.74 | **0.041** | 0.248 | 0.91 | 0.416 | 0.98 |
| Cadr\_000027936 | ENSG00000130783 | Q6P9F0 | CCDC62 | Coiled-coil domain-containing protein 62 | 1.31 | **0.041** | 0.899 | 0.096 | 0.734 | 0.41 |
| Cadr\_000028624 | ENSG00000168454 | Q86VQ3 | TXNDC2 | Thioredoxin domain-containing protein 2 | 2.18 | **0.041** | 1.9 | 0.057 | 1.29 | 0.36 |
| Cadr\_000029654 | ENSG00000147454 | Q9NYZ2 | SLC25A37 | Mitoferrin-1 | 1.87 | **0.041** | 1.8 | 0.054 | 0.816 | 0.58 |
| Cadr\_000012282 | ENSG00000167685 | Q8N0Y2 | ZNF444 | Zinc finger protein 444 | 1.71 | **0.042** | 0.93 | 0.19 | 0.0416 | 1 |
| Cadr\_000013472 | ENSG00000175793 | P31947 | SFN | 14-3-3 protein sigma | 1.36 | **0.043** | 0.573 | 0.37 | 0.251 | 0.98 |
| Cadr\_000015197 | ENSG00000165458 | O15357 | INPPL1 | Phosphatidylinositol 3,4,5-trisphosphate 5-phosphatase 2 | 1.01 | **0.043** | 0.477 | 0.29 | 0.233 | 0.96 |
| Cadr\_000013576 | ENSG00000116514 | Q6ZMZ0 | RNF19B | E3 ubiquitin-protein ligase RNF19B | 0.988 | 0.17 | 2.22 | **0.045** | 0.959 | 0.44 |
| Cadr\_000009001 | ENSG00000276430 | B3EWG5 | FAM25C | Protein FAM25C | 4.83 | **0.047** | 4.08 | 0.065 | 4.95 | 0.096 |
| Cadr\_000016797 | ENSG00000205420 | P02538 | KRT6A | Keratin, type II cytoskeletal 6A | 5.96 | 0.053 | 6.65 | 0.054 | 7.47 | **0.047** |
| Cadr\_000025199 | ENSG00000214456 | Q00G26 | PLIN5 | Perilipin-5 | 2.84 | **0.048** | 0.845 | 0.6 | 0.586 | 0.97 |
| Cadr\_000025074 |  |  |  |  | 1.12 | **0.05** | 0.453 | 0.42 | 0.0936 | 1 |