



[illegible][illegible]

Canine CoV1	NGFYPVAS..SEVGLVNKSVLLPSFYSHTSVNITIDLGMKRSGYGQPIASTLSNITLPMQDNNTDVYCI RSNRFSVYFHSTCKSSLWDDVFNSDCTDVL YATAVIKTGT	613
Feline CoV4	DGFYSASM..LVKKDLPKTFVTMPQFYHWMNVTLHVVLNDTEKKYDIILAKAPELAALADVHF EIAQANGSVTNVTSLCVQARQLALFYKYTSLG LYTYSNLVELQNYD	624
Porcine PEDV	DGYFPISRRNLLSHEQPISFVTLPSFNDHSFVNITVSAAF.....GLSSANLVASDT.....TINGFSSF CVDTRQFTITLFYN...VTNSGYGVSKSQDSN	568
Bovine CoV1	TNFCPCKLDGSLCVGNPGPIDAGYKTSIGITC PAGTNYLTCHNAA.....QCDCICTPD PITSKATGPYKCPQTKYLVGIGEHC SGLAIKSDHC GG	574
Bovine CoV2	TNFCPCKLDGSLCVGNPGPIDAGYKTSIGITC PAGTNYLTCHNAA.....QCDCICTPD PITSKATGPYKCPQTKYLVGIGEHC SGLAIKSDHC GG	574
Human CoV OC43	KNFPCPKLN GSCVGS GPG....KNNGIGTC PAGTNYLTCDN.....LCTPDPITFKATGTYKCPQTKSL VGI GEHC SGLAVKSDYCGG	572
Porcine HEV3	NTYCPCR..TSQCIG.....GAGTGTC PVGTTVRKCFAAVTK.....ATKCTCWCPDPSTYKG VNAWTC PQSKVSIQPGQH CPGLGLVEDDC SG	560
Murine HV1	PSYCPCA QPDIVSACTSQT.....KPMSAYCPT GTI HRECSLWN GPH....LR SARVGS GTYTCECTCKPNPF DTYDL...RCGQIKTI VN VG DHCE GLGVLED K CGN	571
Murine HV2	SSYCPCA QPDIVSPCTTQT.....KP KSAF.....VN VG DHCE GLGVLED N CGN	519
Human Sars CoV	ISNV PFSPDGK PCTPPALN.....	473
	ISNV PFSPDGK PCTPPALN.....	473
Palm civet	ISNV PFSPDGK PCTPPAPN.....	473
IBV3	ATCCYAYS YGPSLCKG.....	383
consensus	***** * *	* * * * *

Canine CoV1 CPFSFDKLNYYLTFNKFCLSNPVGANC KFDVAARTRTNEQVVR. SLYVIYEEDNTIVGVPSDNS. GLHDLVVLHLDSCDTYNIYGITGVGIIRQNTSSTLLSGLYYTSL 720
Feline CoV4 CPFSFPQFNNYLQFETLCFDVNPVAVAGCKWSLVHDVQWRTQFA. TITVSYKHGSMITTHAKGHSW. CFQDTSVLVKDECTYNIYGFGQTGIIRNTTS SRLVAGLYYTSI 731
Porcine PEDV CPFTLQSVNDYLSQSKFCVSTSLLAGACITDLFGYPAGFGSVKLTSLYFQFTKGELITCTPKPLE. GITDSFMTLDVCTKYITYIGFKGEGIIITLNSILAGVYYTSD 676
Bovine CoV1 ...NPCTCQPPAFLGWSVDSCLQGDRCNIFANFILHDVNSGTTCTSDLQKSNITDILGVCVNYDLYGITGQGFIFVEVNATYYNSWQNLLYDSNGNLYG.....FRDYLY 674
Bovine CoV2 ...NPCTCQPPAFLGWSVDSCLQGDRCNIFANFILHDVNSGTTCTSDLQKSNITDILGVCVNYDLYGITGQGFIFVEVNATYYNSWQNLLYDSNGNLYG.....FRDYLY 674
Human CoV OC43 ...NSCTCRPPAFLGWSADSCLQGDKCNIFANFILHDVNSGLTCTSDLQKANTDILGVCVNYDLYGITGQGFIFVEVNATYYNSWQNLLYDSNGNLYG.....FRDYI 672
Porcine HEV3 ...NPCTCKPQAFIGWSSETCLQNGRCNIFANFILNDVNSGTTCTSDLQGGNTIITDDVCVNYDLYGITGQGFIEVNATYYNSWQNLLYDSNGNLYG.....FRDYLY 660
Murine HV1 SDPHKGCSCANDSFIGWSHDTCLVNDRCQIFANILLNGINSGTTCTSDLQLPNTTEVATGVCVNYDLYGITGQGVFEVKADYYNSWQALLYDVNGNLNG.....FRDLT 675
Murine HV2 ADPHKGCICANNSFIGWSHDTCLVNDRCQIFANILLNGINSGTTCTSDLQLPNTTEVVTCTCVKYDLYGITGQGVFEVKADYYNSWQTLLYDVNGNLNG.....FRDLT 623
Human Sars CoVCYWPLNDYGFYTTTGIGYQPYRVVLSFELLNAPATVCGPKLS...TDLTKNQCVNFNFNCLTCTGVLTPS.SKRFQPFQQFGRDVSDFDTS.....VRDPK 566
Palm civetCYWPLNDYGFYTTTGIGYQPYRVVLSFELLNAPATVCGPKLS...TDLTKNQCVNFNFNCLTCTGVLTPS.SKRFQPFQQFGRDVSDFDTS.....VRDPK 566
IBV3CYWPLNGYGFYTTSGIGYQPYRVVLSFELLNAPATVCGPKLS...TDLTKNQCVNFNFNCLTCTGVLTPS.SKRFQPFQQFGRDVSDFDTS.....VRDPK 566
consensusVYSGELDHNFECLLVYVTKSGSRIQTATEPPVITQNNYNITLNTCVDYNIYGRGTGQGFITNVTDSDAVSYNYLADAGLAILDTS.....SG..... 470

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 non-conserved
 $\geq 50\%$ conserved