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YP_009724390                      MFV-------FLVLLPLVSSQCVNLTTRTQLPPAYTNSFTRGVYYPDKVFRSSVLHSTQD 53
SP|P59594|SPIKE_CVHSA             MFI--FLL-FLTLTSGSDLDRCTTFDDVQAPNYTQHTSSMRGVYYPDEIFRSDTLYLTQD 57
TR|Q6UZF4|Q6UZF4_CVHSA            MFI--FLL-FLTLTSGSDLDRCTTFDDVQAPNYTQHTSSMRGVYYPDEIFRSDTLYLTQD 57
TR|Q6UZF0|Q6UZF0_CVHSA            MFI--FLL-FLTLTSGSDLDRCTTFDDVQAPNYTQHTSSMRGVYYPDEIFRSDTLYLTQD 57
TR|Q6JH46|Q6JH46_CVHSA            MFI--FLL-FLTLTSGSDLDRCTTFDDVQAPNYTQHTSSMRGVYYPDEIFRSDTLYLTQD 57
TR|Q692E4|Q692E4_CVHSA            MFI--FLL-FLTLTSGSDLDRCTTFDDVQAPNYTQHTSSMRGVYYPDEIFRSDTLYLTQD 57
SP|Q3LZX1|SPIKE_BCHK3             MKILIF---AFLANLAKAQEGCGIISRKPQPKMAQVSSSRRGVYYNDDIFRSDVLHLTQD 57
SP|Q3I5J5|SPIKE_BCRP3             MKILIL---AFLASLAKAQEGCGIISRKPQPKMAQVSSSRRGVYYNDDIFRSNVLHLTQD 57
SP|Q0Q475|SPIKE_BC279             MKVLIF---ALLFSLAKAQEGCGIISRKPQPKMEKVSSSRRGVYYNDDIFRSDVLHLTQD 57
TR|R9QTA0|R9QTA0_CVHSA            --MILL---LLFLSSAKAQEGCGVISNKPQRTFDQYSSTFRGVYYNDDIFRSDVLHLTQD 55
TR|R9QTH3|R9QTH3_CVHSA            MKIFLF---SLLFSAALAQEGCGLLSFKPQPKLAQFSSSKRGVYYNDDIFRSDVLHLTQD 57
TR|A0A0K1Z074|A0A0K1Z074_CVHSA    MKILIF---AFLVTLVKAQEGCGVINLRTQPKLSQVSSSRRGVYYNDDIFRSDVLHLTQD 57
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA    MKILIF---AFLVTLVKAQEGCGVINLKTQPTLTQVSSSRRGVYYNDDIFRSDVLHLTQD 57
TR|A0A166ZL64|A0A166ZL64_9NIDO    MFIVFLISYTTFLIPYTATTTC--FSGPTIENKLNISSGSRGVYYPDDIFRSNVSVLVTG 58
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA    MFIVFLISYTTFLIPYTATTTC--FKGPTTENKLNISSGSRGVYYPDDIFRSNVSVLVTG 58
                                  :            *  :            .*  ***** *.:***..   . .


YP_009724390                      LFLPFFSNVTWFHAIHVSGTNGTKRFDNPVLPFNDGVYFASTEKSNIIRGWIFGTTLDSK 113
SP|P59594|SPIKE_CVHSA             LFLPFYSNVTGFHTINH-------TFGNPVIPFKDGIYFAATEKSNVVRGWVFGSTMNNK 110
TR|Q6UZF4|Q6UZF4_CVHSA            LFLPFYSNVTGFHTINH-------TFGNPVIPFKDGIYFAATEKSNVVRGWVFGSTMNNK 110
TR|Q6UZF0|Q6UZF0_CVHSA            LFLPFYSNVTGFHTINH-------TFGNPVIPFKDGIYFAATEKSNVVRGWVFGSTMNNK 110
TR|Q6JH46|Q6JH46_CVHSA            LFLPFYSNVTGFHTINH-------TFGNPVIPFKDGIYFAATEKSNVVRGWVFGSTMNNK 110
TR|Q692E4|Q692E4_CVHSA            LFLPFYSNVTGFHTINH-------TFGNPVIPFKDGIYFAATEKSNVVRGWVFGSTMNNK 110
SP|Q3LZX1|SPIKE_BCHK3             YFLPFDSNLTQYFSLNVDS-DRYTYFDNPILDFGDGVYFAATEKSNVIRGWIFGSSFDNT 116
SP|Q3I5J5|SPIKE_BCRP3             YFLPFDSNLTQYFSLNVDS-DRFTYFDNPILDFGDGVYFAATEKSNVIRGWIFGSTFDNT 116
SP|Q0Q475|SPIKE_BC279             YFLPFDSNLTQYFSLNIDS-NKYTYFDNPILDFGDGVYFAATEKSNVIRGWIFGSSFDNT 116
TR|R9QTA0|R9QTA0_CVHSA            YFLPFNTNVTRYLSLNAAQ-NTIVYFDNHVIPFYDGIYFAATERSNVIRGWIFGSTFDNR 114
TR|R9QTH3|R9QTH3_CVHSA            YFLPFHSNLTQYFSLNVDS-DRQVYFDNPTLNFGDGVYFAATEKSNVIRGWIFGSTMDNS 116
TR|A0A0K1Z074|A0A0K1Z074_CVHSA    YFLPFHSNLTQYFSLSIQS-DKIVYFDNPILKFGDGIYFAATEKSNVIRGWIFGSTFDNT 116
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA    YFLPFHSNLTQYFSLNIES-D--IYFDNPILKFGDGVYFAATEKSNVIRGWVFGSTFDNT 114
TR|A0A166ZL64|A0A166ZL64_9NIDO    RFLRFNTTLTWYNSWNQ-------AYSSPVLPFGHGVYFSTIDKSNVVRGWIFGTTLDNT 111
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA    RFLRFNTTLTWYNSWNQ-------AYSSPVLPFGHGVYFSTIDKSNVVRGWIFGTTLDNT 111
                                  ** * :.:* : :            :..  : * .*:**:: ::**::***:**::::.


YP_009724390                      TQSLLIVNNATNVVIKVCEFQFCNDPFLGVYYHKNNKSWMESEFRVYSSANNCTFEYVSQ 173
SP|P59594|SPIKE_CVHSA             SQSVIIINNSTNVVIRACNFELCDNPFFAVSKPMG----TQTHTMIFDNAFNCTFEYISD 166
TR|Q6UZF4|Q6UZF4_CVHSA            SQSVIIINNSTNVVIRACNFELCDNPFFAVSKPMG----TQTHTMIFDNAFNCTFEYISD 166
TR|Q6UZF0|Q6UZF0_CVHSA            SQSVIIINNSTNVVIRACNFELCDNPFFAVSKPMG----TQTHTMIFDNAFNCTFEYISD 166
TR|Q6JH46|Q6JH46_CVHSA            SQSVIIINNSTNVVIRACNFELCDNPFFAVSKPMG----TQTHTMIFDNAFNCTFEYISD 166
TR|Q692E4|Q692E4_CVHSA            SQSVIIINNSTNVVIRACNFELCDNPFFAVSKPMG----TQTHTMIFDNAFNCTFEYISD 166
SP|Q3LZX1|SPIKE_BCHK3             TQSAVIVNNSTHIIIRVCNFNLCKEPMYTVSR--G----TQQNAWVYQSAFNCTYDRVEK 170
SP|Q3I5J5|SPIKE_BCRP3             TQSAVIVNNSTHIIIRVCNFNLCKEPMYTVSR--G----AQQSSWVYQSAFNCTYDRVEK 170
SP|Q0Q475|SPIKE_BC279             TQSAIIVNNSTHIIIRVCNFNLCKEPMYTVSK--G----TQQSSWVYQSAFNCTYDRVEK 170
TR|R9QTA0|R9QTA0_CVHSA            SQSAIIVNNSTHILVKVCNFVLCTEPMFTVSR--N----QHYKSWVYQHARNCTYDVAYP 168
TR|R9QTH3|R9QTH3_CVHSA            TQSAIIVNNSTHIIIRVCNFNLCKEPMFTVSR--G----VHFSSWVYQSAFNCTYDRVEK 170
TR|A0A0K1Z074|A0A0K1Z074_CVHSA    TQSAVIVNNSTHIIIRVCYFNLCKDPMYTVSA--G----TQISSWVYQSAFNCTYDRVEK 170
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA    TQSAIIVNNSTHIIIRVCYFNLCKDPMYTVSA--G----TQVSSWVYQSAFNCTYDRVEK 168
TR|A0A166ZL64|A0A166ZL64_9NIDO    TQSALLVNNGSAITIEVCYFQFCDNPAFIISG--G----AQTNTAIYINLRNCTYVDTLR 165
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA    TQSALLVNNGSAITIEVCYFQFCDNPAFIIRD--G----AQINTAIYINLRNCTYVDTLR 165
                                  :** ::::**.: : :..* * :* :*   :    .     .    ::   ***:
```

```
YP_009724390                      PFLMDLEGK-QGNFKNLREFVFKNIDGYFKIYSKHTPINLVR----DLPQGFSALEPLVD 228
SP|P59594|SPIKE_CVHSA             AFSLDVSEK-SGNFKHLREFVFKNKDGFLYVYKGYQPIDVVR----DLPSGFNTLKPIFK 221
TR|Q6UZF4|Q6UZF4_CVHSA            AFSLDVSEK-SGNFKHLREFVFKNKDGFLYVYKGYQPIDVVR----DLPSGFNTLKPIFK 221
TR|Q6UZF0|Q6UZF0_CVHSA            AFSLDVSEK-SGNFKHLREFVFKNKDGFLYVYKGYQPIDVVR----DLPSGFNTLKPIFK 221
TR|Q6JH46|Q6JH46_CVHSA            AFSLDVSEK-SGNFKHLREFVFKNKDGFLYVYKGYQPIDVVR----DLPSGFNTLKPIFK 221
TR|Q692E4|Q692E4_CVHSA            AFSLDVSEK-SGNFKHLREFVFKNKDGFLYVYKGYQPIDVVR----DLPSGFNTLKPIFK 221
SP|Q3LZX1|SPIKE_BCHK3             SFQLDTTPK-TGNFKDLREYVFKNRDGFLSVYQTYTAVNLPR----GLPTGFSVLKPILK 225
SP|Q3I5J5|SPIKE_BCRP3             SFQLDTAPK-TGNFKDLREYVFKNRDGFLSVYQTYTAVNLPR----GLPIGFSVLRPILK 225
SP|Q0Q475|SPIKE_BC279             SFQLDTAPK-TGNFKDLREYVFKNRDGFLSVYQTYTAVNLPR----GFPAGFSVLRPILK 225
TR|R9QTA0|R9QTA0_CVHSA            SFQLDVSLKNNVNFQHLREFIFKNVDGFLKIYSSYEPINVVS----GIPSGFSVLKPVMS 224
TR|R9QTH3|R9QTH3_CVHSA            SFQLDTAPK-TGNFKDLREYVFKNRDGFLSVYHSYTPVDIIR----GIPVGFSVLKPILK 225
TR|A0A0K1Z074|A0A0K1Z074_CVHSA    SFQLDTAPK-SGNFIALREFVFKNRDGFFTVYQDYTPVNLLR----GLPAGLSVLKPILK 225
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA    SFQLDTSPK-TGNFTDLREFVFKNRDGFFTVYQTYTPVNLLR----GLPSGLSVLKPILK 223
TR|A0A166ZL64|A0A166ZL64_9NIDO    DLPLSFED-VDGGFKHLREFVFKNSDGFLHIYGAYQPYDLAIGATAALPAQFLPLKPLWK 224
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA    DLPLSFAE-VDGGFKHLREFVFKNSDGFLHIYGAYQPYDLAIGATAALPAQFLPLKPLWK 224
                                   : :.        .*  ***:****  **::  :*   :    ::         :*   :  *.*: .


YP_009724390                      LPIGINITRFQTLLALHRSYLTPGDSSSGWTAGAAAYYVGYLQPRTFLLKYNENGTITDA 288
SP|P59594|SPIKE_CVHSA             LPLGINITNFRAILTAFS------PAQDIWGTSAAAYFVGYLKPTTFMLKYDENGTITDA 275
TR|Q6UZF4|Q6UZF4_CVHSA            LPLGINITNFRAILTAFS------PAQDIWGTSAAAYFVGYLKPTTFMLKYDENGTITDA 275
TR|Q6UZF0|Q6UZF0_CVHSA            LPLGINITNFRAILTAFS------PAQDIWGTSAAAYFVGYLKPTTFMLKYDENGTITDA 275
TR|Q6JH46|Q6JH46_CVHSA            LPLGINITNFRAILTAFS------PAQDIWGTSAAAYFVGYLKPTTFMLKYDENGTITDA 275
TR|Q692E4|Q692E4_CVHSA            LPLGINITNFRAILTAFS------PAQDTWGTSAAAYFVGYLKPTTFMLKYDENGTITDA 275
SP|Q3LZX1|SPIKE_BCHK3             LPFGINITSYRVVMAMFS------QTTSNFLPESAAYYVGNLKYSTFMLRFNENGTITDA 279
SP|Q3I5J5|SPIKE_BCRP3             LPFGINITSYRVVMAMFS------QTTSNFLPESAAYYVGNLKYTTFMLSFNENGTITNA 279
SP|Q0Q475|SPIKE_BC279             LPFGINITSYRVVMTMFS------QFNSNFLPESAAYYVGNLKYTTFMLSFNENGTITDA 279
TR|R9QTA0|R9QTA0_CVHSA            LPLGINITGMRVVMTMFS------NTQANFLTENAAYYVGYLKPRTFMLQFNTNGTIVNA 278
TR|R9QTH3|R9QTH3_CVHSA            LPIGINITSFKVVMTMYS------QTTSNFLSESAAYYVGNLKYVTFMFQFNENGTIADA 279
TR|A0A0K1Z074|A0A0K1Z074_CVHSA    LPFGINITSFRVVMAMFS------KTTSNYVPESAAYYVGNLKQSTFMLSFNQNGTITDA 279
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA    LPFGINITSFRVVMAMFS------KTTSNYVPESAAYYVGNLKQSTFMLSFNQNGTIVDA 277
TR|A0A166ZL64|A0A166ZL64_9NIDO    LPLGLNITNYKVVTTLKP------TNQ----AFQAAYIVGNLKHTTMMLSFNENGTMSNA 274
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA    LPLGLNITNYKVVTTLKP------TNQ----AFQAAYIVGNLKHTTMMLSFNENGTMSNA 274
                                   **:*:***   :.: :             *** ** *:   *::: :: ***: :*


YP_009724390                      VDCALDPLSETKCTLKSFTVEKGIYQTSNFRVQPTESIVRFPNITNLCPFGEVFNATRFA 348
SP|P59594|SPIKE_CVHSA             VDCSQNPLAELKCSVKSFEIDKGIYQTSNFRVVPSGDVVRFPNITNLCPFGEVFNATKFP 335
TR|Q6UZF4|Q6UZF4_CVHSA            VDCSQNPLAELKCSVKSFEIDKGIYQTSNFRVVPSGDVVRFPNITNLCPFGEVFNATKFP 335
TR|Q6UZF0|Q6UZF0_CVHSA            VDCSQNPLAELKCSVKSFEIDKGIYQTSNFRVVPSGDVVRFPNITNLCPFGEVFNATKFP 335
TR|Q6JH46|Q6JH46_CVHSA            VDCSQNPLAELKCSVKSFEIDKGIYQTSNFRVVPSGDVVRFPNITNLCPFGEVFNATKFP 335
TR|Q692E4|Q692E4_CVHSA            VDCSQNPLAELKCSVKSFEIDKGIYQTSNFRVVPSGDVVRFPNITNLCPFGEVFNATKFP 335
SP|Q3LZX1|SPIKE_BCHK3             VDCSQNPLAELKCTIKNFNVDKGIYQTSNFRVSPTQEVIRFPNITNRCPFDKVFNATRFP 339
SP|Q3I5J5|SPIKE_BCRP3             IDCAQNPLAELKCTIKNFNVSKGIYQTSNFRVSPTQEVIRFPNITNRCPFDKVFNATRFP 339
SP|Q0Q475|SPIKE_BC279             VDCSQNPLAELKCTIKNFNVSKGIYQTSNFRVTPTQEVVRFPNITNRCPFDKVFNASRFP 339
TR|R9QTA0|R9QTA0_CVHSA            VDCSQDPLSELKCTLKNFNITKGIYQTSNFRVSPTQEVVRFPNITNRCPFDKVFNATRFP 338
TR|R9QTH3|R9QTH3_CVHSA            VDCSQNPLAELKCTLKNFNVSKGIYQTSNFRVSPSTEVIRFPNITNRCPFDRVFNASRFP 339
TR|A0A0K1Z074|A0A0K1Z074_CVHSA    VDCSQNPLAELKCTTKSFNVSKGIYQTSNFRVAPVTEVVRFPNITNLCPFDKVFNATRFP 339
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA    VDCSQDPLAELKCTTKSFNVSKGIYQTSNFRVSPVTEVVRFPNITNLCPFDKVFNATRFP 337
TR|A0A166ZL64|A0A166ZL64_9NIDO    IDCSQDPLAELKCTLKQFDVGKGIYQTSNFRVQPTVDVARFPNITNVCPFDKVFNATRFP 334
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA    IDCSQDPLAELKCTLKQFDVGKGIYQTSNFRVQPTVDVARFPNITNVCPFDKVFNATRFP 334
                                   :**: :**:* **: *.* : ********** *  .: ******* ***..****:*


YP_009724390                      SVYAWNRKRISNCVADYSVLYNSASFSTFKCYGVSPTKLNDLCFTNVYADSFVIRGDEVR 408
SP|P59594|SPIKE_CVHSA             SVYAWERKKISNCVADYSVLYNSTFFSTFKCYGVSATKLNDLCFSNVYADSFVVKGDDVR 395
TR|Q6UZF4|Q6UZF4_CVHSA            SVYAWERKKISNCVADYSVLYNSTFFSTFKCYGVSATKLNDLCFSNVYADSFVVKGDDVR 395
TR|Q6UZF0|Q6UZF0_CVHSA            SVYAWERKKISNCVADYSVLYNSTFFSTFKCYGVSATKLNDLCFSNVYADSFVVKGDDVR 395
TR|Q6JH46|Q6JH46_CVHSA            SVYAWERKKISNCVADYSVLYNSTFFSTFKCYGVSATKLNDLCFSNVYADSFVVKGDDVR 395
TR|Q692E4|Q692E4_CVHSA            SVYAWERKKISNCVADYSVLYNSTFFSTFKCYGVSATKLNDLCFSNVYADSFVVKGDDVR 395
SP|Q3LZX1|SPIKE_BCHK3             NVYAWERTKISDCVADYTVLYNSTSFSTFKCYGVSPSKLIDLCFTSVYADTFLIRSSEVR 399
SP|Q3I5J5|SPIKE_BCRP3             NVYAWERTKISDCVADYTVLYNSTSFSTFKCYGVSPSKLIDLCFTSVYADTFLIRSSEVR 399
SP|Q0Q475|SPIKE_BC279             NVYAWERTKISDCVADYTVLYNSTSFSTFKCYGVSPSKLIDLCFTSVYADTFLIRSSEVR 399
TR|R9QTA0|R9QTA0_CVHSA            SVYAWERTKISDCVADYTVLYNSTSFSTFKCYGVSPSKLIDLCFTSVYADTFLIRSSEVR 398
TR|R9QTH3|R9QTH3_CVHSA            SVYAWERTKISDCVADYTVLYNSTSFSTFKCYGVSPSKLIDLCFTSVYADTFLIRFSEVR 399
TR|A0A0K1Z074|A0A0K1Z074_CVHSA    SVYAWNRKISDCVADYTVFYNSTSFSTFNCYGVSPSKLIDLCFTSVYADTFLIRFSEVR 399
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA    SVYAWNRKISDCVADYTVFYNSTSFSTFNCYGVSPSKLIDLCFTSVYADTFLIRFSEVR 397
TR|A0A166ZL64|A0A166ZL64_9NIDO    SVYAWERTKISDCVADYTVFYNSTSFSTFNCYGVSPSKLIDLCFTSVYADTFLIRFSEVR 394
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA    SVYAWERTKISDCVADYTVFYNSTSFSTFNCYGVSPSKLIDLCFTSVYADTFLIRFSEVR 394
                                   .****:*.:**:*****:*:***: ****:**** :** ****:.****:*::: .:**
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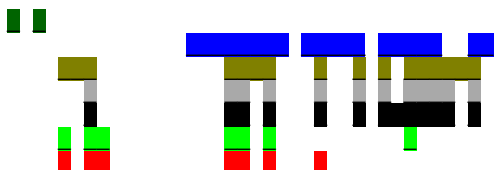
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YP_009724390                        QIAPGQTGKIADYNYKLPDDFTGCVIAWNSNNLDSKVGGNYNYLYRLFRKSNLKPFERDI 468
SP|P59594|SPIKE_CVHSA               QIAPGQTGVIADYNYKLPDDFMGCVLAWNTRNIDATSTGNYNYKYRYLRHGKLRPFERDI 455
TR|Q6UZF4|Q6UZF4_CVHSA              QIAPGQTGVIADYNYKLPDDFMGCVLAWNTRNIDATSTGNYNYKYRYLRHGKLRPFERDI 455
TR|Q6UZF0|Q6UZF0_CVHSA              QIAPGQTGVIADYNYKLPDDFMGCVLAWNTRNIDATSTGNYNYKYRYLRHGKLRPFERDI 455
TR|Q6JH46|Q6JH46_CVHSA              QIAPGQTGVIADYNYKLPDDFMGCVLAWNTRNIDATSTGNYNYKYRSLRHGKLRPFERDI 455
TR|Q692E4|Q692E4_CVHSA              QIAPGQTGVIADYNYKLPDDFMGCVLAWNTRNIDATSTGNYNYKYRYLRHGKLRPFERDI 455
SP|Q3LZX1|SPIKE_BCHK3               QVAPGETGVIADYNYKLPDDFTGCVIAWNTAKHDTG-----NYYRSHRKTKLKPFERDI 454
SP|Q3I5J5|SPIKE_BCRP3               QVAPGETGVIADYNYKLPDDFTGCVIAWNTAKQDQG-----QYYYRSHRKTKLKPFERDI 454
SP|Q0Q475|SPIKE_BC279               QVAPGETGVIADYNYKLPDDFTGCVIAWNTAQQDQG-----QYYYRSYRKEKLKPFERDL 454
TR|R9QTA0|R9QTA0_CVHSA              QVAPGETGVIADYNYKLPDDFTGCVIAWNTANQDQG-----QYYYRSSRKEKLKPFERDL 453
TR|R9QTH3|R9QTH3_CVHSA              QIAPGETGVIADYNYKLPDEFTGCVIAWNTANQDRG-----QYYYRSSRKTKLKPFERDL 454
TR|A0A0K1Z074|A0A0K1Z074_CVHSA      QVAPGQTGVIADYNYKLPDDFTGCVIAWNTAKYDVG-----SYFYRSHRSSKLKPFERDL 454
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA      QVAPGQTGVIADYNYKLPDDFTGCVIAWNTAKQDVG-----SYFYRSHRSSKLKPFERDL 452
TR|A0A166ZL64|A0A166ZL64_9NIDO      QVAPGQTGVIADYNYKLPDDFIGCVIAWNTAKQDVG-----SYFYRSHRSSKLKPFERDL 449
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA      QVAPGQTGVIADYNYKLPDDFIGCVIAWNTAKQDVG-----SYFYRSHRSSKLKPFERDL 449
                                    *:***:** **********:* ***:***: : *      .* **   * :*:*****:

YP_009724390                        STEIYQAGSTPCNGVEGFNCYFPLQSYGFQPTNGVGYQPYRVVVLSFELLHAPATVCGPK 528
SP|P59594|SPIKE_CVHSA               SNVPFSPDGKPCTPP-ALNCYWPLNDYGFYTTTGIGYQPYRVVVLSFELLNAPATVCGPK 514
TR|Q6UZF4|Q6UZF4_CVHSA              SNVPFSPDGKPCTPP-ALNCYWPLNDYGFYTTTGIGYQPYRVVVLSFELLNAPATVCGPK 514
TR|Q6UZF0|Q6UZF0_CVHSA              SNVPFSPDGKPCTPP-ALNCYWPLNDYGFYTTTGIGYQPYRVVVLSFELLNAPATVCGPK 514
TR|Q6JH46|Q6JH46_CVHSA              SNVPFSPDGKPCTPP-ALNCYWPLNDYGFYTTTGIGYQPYRVVVLSFELLNAPATVCGPK 514
TR|Q692E4|Q692E4_CVHSA              SNVPFSPDGKPCTPP-ALNCYWPLNDYGFYTTTGIGYQPYRVVVLSFELLNAPATVCGPK 514
SP|Q3LZX1|SPIKE_BCHK3               SSDD-------------GNGVYTLSTYDFNPNVPVAYQATRVVVLSFELLNAPATVCGPK 501
SP|Q3I5J5|SPIKE_BCRP3               SSD--------------ENGVRTLSTYDFYPSVPVAYQATRVVVLSFELLNAPATVCGPK 500
SP|Q0Q475|SPIKE_BC279               SSD--------------ENGVYTLSTYDFYPSIPVEYQATRVVVLSFELLNAPATVCGPK 500
TR|R9QTA0|R9QTA0_CVHSA              SSD--------------ENGVYTLSTYDFYPSVPLDYQATRVVVLSFELLNAPATVCGPK 499
TR|R9QTH3|R9QTH3_CVHSA              SSD--------------ENGVRTLSTYDFYPSVPLEYQATRVVVLSFELLNAPATVCGPK 500
TR|A0A0K1Z074|A0A0K1Z074_CVHSA      SSE--------------ENGARTLSTYDFNQNVPLEYQATRVVVLSFELLNAPATVCGPK 500
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA      SSE--------------ENGVRTLSTYDFNQYVPLEYQATRVVVLSFELLNAPATVCGPK 498
TR|A0A166ZL64|A0A166ZL64_9NIDO      SSE--------------ENGVLTLSTYDFNQNVPLEYQATRVVVLSFELLNAPATVCGPK 495
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA      SSE--------------ENGVLTLSTYDFNQNVPLEYQATRVVVLSFELLNAPATVCGPK 495
                                    *.              *    *. *.*    : ** **********:*********

YP_009724390                        KSTNLVKNKCVNFNFNGLTGTGVLTESNKKFLPFQQFGRDIADTTDAVRDPQTLEILDIT 588
SP|P59594|SPIKE_CVHSA               LSTDLIKNQCVNFNFNGLTGTGVLTPSSKRFQPFQQFGRDVSDFTDSVRDPKTSEILDIS 574
TR|Q6UZF4|Q6UZF4_CVHSA              LSTDLIKNQCVNFNFNGLTGTGVLTPSSKRFQPFQQFGRDVSDFTDSVRDPKTSEILDIS 574
TR|Q6UZF0|Q6UZF0_CVHSA              LSTDLIKNQCVNFNFNGLTGTGVLTPSSKRFQPFQQFGRDVSDFTDSVRDPKTSEILDIS 574
TR|Q6JH46|Q6JH46_CVHSA              LSTDLIKNQCVNFNFNGLTGTGVLTPSSKRFQPFQQFGRDVSDFTDSVRDPKTSEILDIS 574
TR|Q692E4|Q692E4_CVHSA              LSTDLIKNQCVNFNFNGLTGTGVLTPSSKRFQPFQQFGRDVSDFTDSVRDPKTSEILDIS 574
SP|Q3LZX1|SPIKE_BCHK3               LSTELVKNQCVNFNFNGLKGTGVLTSSSKRFQSFQQFGRDTSDFTDSVRDPQTLEILDIS 561
SP|Q3I5J5|SPIKE_BCRP3               LSTQLVKNQCVNFNFNGLKGTGVLTESSKRFQSFQQFGRDTSDFTDSVRDPQTLEILDIS 560
SP|Q0Q475|SPIKE_BC279               LSTQLVKNQCVNFNFNGLRGTGVLTSSKRFQSFQQFGRDTSDFTDSVRDPQTLEILDIS 560
TR|R9QTA0|R9QTA0_CVHSA              LSTTLVKNQCVNFNFNGLKGTGVLTASSKKFQSFQQFGRDASDFTDSVRDPQTLEILDIS 559
TR|R9QTH3|R9QTH3_CVHSA              LSTSLIKNQCVNFNFNGLKGTGVLTDSSKKFQSFQQFGRDASDFTDSVRDPQTLQILDIS 560
TR|A0A0K1Z074|A0A0K1Z074_CVHSA      LSTSLVKNQCVNFNFNGFKGTGVLTDSSKTFQSFQQFGRDASDFTDSVRDPKTLQILDIS 560
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA      LSTSLVKNQCVNFNFNGFKGTGVLTDSSKTFQSFQQFGRDASDFTDSVRDPQTLRILDIS 558
TR|A0A166ZL64|A0A166ZL64_9NIDO      LSTPLVKNQCVNFNFNGLKGTGVLTDSSKTFQSFQQFGRDASDFTDSVRDPQTLQILDIS 555
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA      LSTPLVKNQCVNFNFNGLKGTGVLTDSSKTFQSFQQFGRDASDFTDSVRDPQTLQILDIS 555
                                    ** *:**:*********: ****** *.* *  ******* :* **:****:* .****:
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                                          ▪  ▪▪             ▪▪                              ▪
YP_009724390                 PCSFGGVSVITPGTNTSNQVAVLYQDVNCTEVPVAIHADQLTPTWRVYSTGSNVFQTRAG 648
SP|P59594|SPIKE_CVHSA        PCSFGGVSVITPGTNASSEVAVLYQDVNCTDVSTAIHADQLTPAWRIYSTGNNVFQTQAG 634
TR|Q6UZF4|Q6UZF4_CVHSA       PCSFGGVSVITPGTNASSEVAVLYQDVNCTDVSTAIHADQLTPAWRIYSTGNNVFQTQAG 634
TR|Q6UZF0|Q6UZF0_CVHSA       PCSFGGVSVITPGTNASSEVAVLYQDVNCTDVSTAIHADQLTPAWRIYSTGNNVFQTQAG 634
TR|Q6JH46|Q6JH46_CVHSA       PCSFGGVSVITPGTNASSEVAVLYQDVNCTDVSTAIHADQLTPAWRIYSTGNNVFQTQAG 634
TR|Q692E4|Q692E4_CVHSA       PCSFGGVSVITPGTNASSEVAVLYQDVNCTDVSTAIHADQLTPAWRIYSTGNNVFQTQAG 634
SP|Q3LZX1|SPIKE_BCHK3        PCSFGGVSVITPGTNASSEVAVLYQDVNCTDVPTAIRADQLTPAWRVYSTGVNVFQTQAG 621
SP|Q3I5J5|SPIKE_BCRP3        PCSFGGVSVITPGTNASSEVAVLYQDVNCTDVPAAIHADQLTPAWRVYSTGTNVFQTQAG 620
SP|Q0Q475|SPIKE_BC279        PCSFGGVSVITPGTNASSEVAVLYQDVNCTDVPTSIHADQLTPAWRVYSTGVNVFQTQAG 620
TR|R9QTA0|R9QTA0_CVHSA       PCSFGGVSVITPGTNASTEVAVLYQDVNCTDVPTAINADQLTPAWRVYSTGINVFQTQAG 619
TR|R9QTH3|R9QTH3_CVHSA       PCSFGGVSVITPGTNASSEVAVLYQDVNCTDVPTAIRADQLTPAWRVYSAGVNVFQTQAG 620
TR|A0A0K1Z074|A0A0K1Z074_CVHSA PCSFGGVSVITPGTNTSSAVAVLYQDVNCTDVPKTIHADQLAPSWRVYTSGPFVFQTQAG 620
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA PCSFGGVSVITPGTNTSSAVAVLYQDVNCTDVPTTLHADQLAPSWRVYTTGPYVFQTQAG 618
TR|A0A166ZL64|A0A166ZL64_9NIDO PCSFGGVSVITPGTNTSSAVAVLYQDVNCTDVPTTIHADHLTHSWRVYTTGPYVFQTQAG 615
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA PCSFGGVSVITPGTNTSSAVAVLYQDVNCTDVPTTIHADHLTHSWRVYTTGPYVFQTQAG 615
                             ***************:*. ***********:*   ::.**:*: :**:*::*  ****:**


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YP_009724390                 CLIGAEHVNNSYECDIPIGAGICASYQTQTNSPRRARSVASQSIIAYTMSLGAENSVAYS 708
SP|P59594|SPIKE_CVHSA        CLIGAEHVDTSYECDIPIGAGICASYHTVS----LLRSTSQKSIVAYTMSLGADSSIAYS 690
TR|Q6UZF4|Q6UZF4_CVHSA       CLIGAEHVDTSYECDIPIGAGICASYHTVS----LLRSTSQKSIVAYTMSLGADSSIAYS 690
TR|Q6UZF0|Q6UZF0_CVHSA       CLIGAEHVDTSYECDIPIGAGICASYHTVS----LLRSTSQKSIVAYTMSLGADSSIAYS 690
TR|Q6JH46|Q6JH46_CVHSA       CLIGAEHVDTSYECDIPIGAGICASYHTVS----LLRSTSQKSIVAYTMSLGADSSIAYS 690
TR|Q692E4|Q692E4_CVHSA       CLIGAEHVDTSYECDIPIGAGICASYHTVS----LLRNTSQKSIVAYTMSLGADSSIAYS 690
SP|Q3LZX1|SPIKE_BCHK3        CLIGAEHVNASYECDIPIGAGICASYHTAS----VLRSTGQKSIVAYTMSLGAENSIAYA 677
SP|Q3I5J5|SPIKE_BCRP3        CLIGAEHVNASYECDIPIGAGICASYHTAS----TLRSVGQKSIVAYTMSLGAENSIAYA 676
SP|Q0Q475|SPIKE_BC279        CLIGAEHVNASYECDIPIGAGICASYHTAS----VLRSTGQKSIVAYTMSLGAENSIAYA 676
TR|R9QTA0|R9QTA0_CVHSA       CLIGAEHVNASYECDIPIGAGICASYHTAS----VLRSTGQKSIVAYTMSLGAENSIAYA 675
TR|R9QTH3|R9QTH3_CVHSA       CLIGAEHVNASYECDIPIGAGICASYHTAS----LLRNTGQKSIVAYTMSLGAENSIAYA 676
TR|A0A0K1Z074|A0A0K1Z074_CVHSA CLIGAEHVNSSYECDIPIGAGICASYHTAS----VLRSTGQKSIVAYTMSLGAENSVAYA 676
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA CLIGAEHVNASYQCDIPIGAGICASYHTAS----LLRSTGQKSIVAYTMSLGAENSVAYA 674
TR|A0A166ZL64|A0A166ZL64_9NIDO CLIGAEHVNASYQCDIPIGAGICASYHTAS----LLRSTGQKSIVAYTMSLGAENSVAYA 671
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA CLIGAEHVNASYQCDIPIGAGICASYHTAS----LLRSTGQKSIVAYTMSLGAENSVAYA 671
                             ********: **:**************:*  :      *....:**:*********:.*:**:


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YP_009724390                 NNSIAIPTNFTISVTTEILPVSMTKTSVDCTMYICGDSTECSNLLLQYGSFCTQLNRALT 768
SP|P59594|SPIKE_CVHSA        NNTIAIPTNFSISITTEVMPVSMAKTSVDCNMYICGDSTECANLLLQYGSFCTQLNRALS 750
TR|Q6UZF4|Q6UZF4_CVHSA       NNTIAIPTNFSISITTEVMPVSMAKTSVDCNMYICGDSTECANLLLQYGSFCTQLNRALS 750
TR|Q6UZF0|Q6UZF0_CVHSA       NNTIAIPTNFSISITTEVMPVSMAKTSVDCNMYICGDSTECANLLLQYGSFCTQLNRALS 750
TR|Q6JH46|Q6JH46_CVHSA       NNTIAIPTNFSISITTEVMPVSMAKTSVDCNMYICGDSTECANLLLQYGSFCTQLNRALS 750
TR|Q692E4|Q692E4_CVHSA       NNTIAIPTNFSISITTEVMPVSMAKTSVDCNMYICGDSTECANLLLQYGSFCTQLNRALS 750
SP|Q3LZX1|SPIKE_BCHK3        NNSIAIPTNFSISVTTEVMPVSMAKTAVDCTMYICGDSLECSNLLLQYGSFCTQLNRALT 737
SP|Q3I5J5|SPIKE_BCRP3        NNSIAIPTNFSISVTTEVMPVSMAKTSVDCTMYICGDSLECSNLLLQYGSFCTQLNRALS 736
SP|Q0Q475|SPIKE_BC279        NNSIAIPTNFSISVTTEVMPVSIAKTSVDCTMYICGDSLECSNLLLQYGSFCTQLNRALT 736
TR|R9QTA0|R9QTA0_CVHSA       NNSIAIPTNFSISVTTEVMPVSMAKTSVDCTMYICGDSLECSNLLLQYGSFCTQLNRALT 735
TR|R9QTH3|R9QTH3_CVHSA       NNSIAIPTNFSISVTTEVMPVSMAKTSVDCTMYICGDSQECSNLLLQYGSFCTQLNRALS 736
TR|A0A0K1Z074|A0A0K1Z074_CVHSA NNSIAIPTNFSISVTTEVMPVSMAKTSVDCTMYICGDSAECSNLLLQYGSFCTQLNRALS 736
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA NNSIAIPTNFSISVTTEVMPVSMAKTSVDCTMYICGDSLECSNLLLQYGSFCTQLNRALS 734
TR|A0A166ZL64|A0A166ZL64_9NIDO NNSIAIPTNFSISVTTEVMPVSMAKTSVDCTMYICGDSLECSNLLLQYGSFCTQLNRALS 731
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA NNSIAIPTNFSISVTTEVMPVSMAKTSVDCTMYICGDSLECSNLLLQYGSFCTQLNRALS 731
                             **:*******:**:***::***::**:***.******* **:****************:


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YP_009724390                 GIAVEQDKNTQEVFAQVKQIYKTPPIKDFGGFNFSQILPDPSKPSKRSFIEDLLFNKVTL 828
SP|P59594|SPIKE_CVHSA        GIAAEQDRNTREVFAQVKQMYKTPTLKYFGGFNFSQILPDPLKPTKRSFIEDLLFNKVTL 810
TR|Q6UZF4|Q6UZF4_CVHSA       GIAAEQDRNTREVFAQVKQMYKTPTLKYFGGFNFSQILPDPLKPTKRSFIEDLLFNKVTL 810
TR|Q6UZF0|Q6UZF0_CVHSA       GIAAEQDRNTREVFAQVKQMYKTPTLKYFGGFNFSQILPDPLKPTKRSFIEDLLFNKVTL 810
TR|Q6JH46|Q6JH46_CVHSA       GIAAEQDRNTREVFAQVKQMYKTPTLKYFGGFNFSQILPDPLKPTKRSFIEDLLFNKVTL 810
TR|Q692E4|Q692E4_CVHSA       GIAAEQDRNTREVFAQVKQMYKTPTLKYFGGFNFSQILPDPLKPTKRSFIEDLLFNKVTL 810
SP|Q3LZX1|SPIKE_BCHK3        GIAIEQDKNTQEVFAQVKQMYKTPAIKDFGGFNFSQILPDPSKPTKRSFIEDLLFNKVTL 797
SP|Q3I5J5|SPIKE_BCRP3        GIAIEQDKNTQEVFAQVKQMYKTPAIKDFGGFNFSQILPDPSKPTKRSFIEDLLFNKVTL 796
SP|Q0Q475|SPIKE_BC279        GIAIEQDKNTQEVFAQVKQMYKTPAIKDFGGFNFSQILPDPSKPTKRSFIEDLLFNKVTL 796
TR|R9QTA0|R9QTA0_CVHSA       GIAIEQDKNTQEVFAQVKQMYKTPAIKDFGGFNFSQILPDPSKPTKRSFIEDLLFNKVTL 795
TR|R9QTH3|R9QTH3_CVHSA       GIAVEQDKNTQEVFAQVKQMYKTPAIKDFGGFNFSQILPDPSKPTKRSFIEDLLFNKVTL 796
TR|A0A0K1Z074|A0A0K1Z074_CVHSA GIAVEQDKNTQEVFAQVKQMYKTPTLRDFGGFNFSQILPDPLKPTKRSFIEDLLYNKVTL 796
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA GIAVEQDKNTQEVFAQVKQMYKTPTIRDFGGFNFSQILPDPLKPTKRSFIEDLLYNKVTL 794
TR|A0A166ZL64|A0A166ZL64_9NIDO GIAVEQDKNTQEVFAQVKQMYKTPTIRDFGGFNFSQILPDPLKPTKRSFIEDLLYNKVTL 791
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA GIAVEQDKNTQEVFAQVKQMYKTPTIRDFGGFNFSQILPDPLKPTKRSFIEDLLYNKVTL 791
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YP_009724390                           ADAGFIKQYGDCLGDIAARDLICAQKFNGLTVLPPLLTDEMIAQYTSALLAGTITSGWTF 888
SP|P59594|SPIKE_CVHSA                  ADAGFMKQYGECLGDINARDLICAQKFNGLTVLPPLLTDDMIAAYTAALVSGTATAGWTF 870
TR|Q6UZF4|Q6UZF4_CVHSA                 ADAGFMKQYGECLGDINARDLICAQKFNGLTVLPPLLTDDMIAAYTAALVSGTATAGWTF 870
TR|Q6UZF0|Q6UZF0_CVHSA                 ADAGFMKQYGECLGDINARDLICAQKFNGLTVLPPLLTDDMIAAYTAALVSGTATAGWTF 870
TR|Q6JH46|Q6JH46_CVHSA                 ADAGFMKQYGECLGDINARDLICAQKFNGLTVLPPLLTDDMIAAYTAALVSGTATAGWTF 870
TR|Q692E4|Q692E4_CVHSA                 ADAGFMKQYGECLGDINARDLICAQKFNGLTVLPPLLTDDMIAAYTAALVSGTATAGWTF 870
SP|Q3LZX1|SPIKE_BCHK3                  ADAGFMKQYGDCLGDVSARDLICAQKFNGLTVLPPLLTDEMVAAYTAALVSGTATAGWTF 857
SP|Q3I5J5|SPIKE_BCRP3                  ADAGFMKQYGECLGDISARDLICAQKFNGLTVLPPLLTDEMIAAYTAALVSGTATAGWTF 856
SP|Q0Q475|SPIKE_BC279                  ADAGFMKQYGECLGDISARDLICAQKFNGLTVLPPLLTDEMIAAYTAALVSGTATAGWTF 856
TR|R9QTA0|R9QTA0_CVHSA                 ADAGFMKQYGECLGDISARDLICAQKFNGLTVLPPLLTDEMIAAYTAALVSGTATAGWTF 855
TR|R9QTH3|R9QTH3_CVHSA                 ADAGFMKQYGECLGDISARDLICAQKFNGLTVLPPLLTDEMIAAYTAALVSGTATAGWTF 856
TR|A0A0K1Z074|A0A0K1Z074_CVHSA         ADAGFMKQYADCLGGINARDLICAQKFNGLTVLPPLLTDDMIAAYTAALISGTATAGWTF 856
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA         ADAGFMKQYADCLGGINARDLICAQKFNGLTVLPPLLTDDMIAAYTAALISGTATAGWTF 854
TR|A0A166ZL64|A0A166ZL64_9NIDO         ADAGFMKQYADCLGGINARDLICAQKFNGLTVLPPLLTDDMIAAYTAALISGTATAGWTF 851
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA         ADAGFMKQYADCLGGINARDLICAQKFNGLTVLPPLLTDDMIAAYTAALISGTATAGWTF 851
                                       *****:***.:***.: ********************:*:* **:**::** *:****

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YP_009724390                           GAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKLIANQFNSAIGKIQDSLSSTASALGKL 948
SP|P59594|SPIKE_CVHSA                  GAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKIANQFNKAISQIQESLTTTSTALGKL 930
TR|Q6UZF4|Q6UZF4_CVHSA                 GAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKIANQFNKAISQIQESLTTTSTALGKL 930
TR|Q6UZF0|Q6UZF0_CVHSA                 GAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKIANQFNKAISQIQESLTTTSTALGKL 930
TR|Q6JH46|Q6JH46_CVHSA                 GAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKIANQFNKAISQIQESLTTTSTALGKL 930
TR|Q692E4|Q692E4_CVHSA                 GAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKIANQFNKAISQIQESLTTTSTALGKL 930
SP|Q3LZX1|SPIKE_BCHK3                  GAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKLIANQFNSAIGKIQESLSSTASALGKL 917
SP|Q3I5J5|SPIKE_BCRP3                  GAGSALQIPFAMQMAYRFNGIGVTQNVLYENQKIANQFNKAISQIQESLTTTSTALGKL 916
SP|Q0Q475|SPIKE_BC279                  GAGSALQIPFAMQMAYRFNGIGVTQNVLYENQKIANQFNKAISQIQESLTTTSTALGKL 916
TR|R9QTA0|R9QTA0_CVHSA                 GAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKIANQFNKAISQIQESLTTTSTALGKL 915
TR|R9QTH3|R9QTH3_CVHSA                 GAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKIANQFNKAISQIQESLTTTSTALGKL 916
TR|A0A0K1Z074|A0A0K1Z074_CVHSA         GAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKIANQFNKAITQIQESLTTTSTALGKL 916
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA         GAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKIANQFNKAITQIQESLTTTSTALGKL 914
TR|A0A166ZL64|A0A166ZL64_9NIDO         GAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKIANQFNKAITQIQESLTTTTATALGKL 911
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA         GAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKIANQFNKAITQIQESLTTTATALGKL 911
                                       ***:************************** ******.** :**:**::*::*****

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YP_009724390                           QDVVNQNAQALNTLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 1008
SP|P59594|SPIKE_CVHSA                  QDVVNQNAQALNTLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 990
TR|Q6UZF4|Q6UZF4_CVHSA                 QDVVNQNAQALNTLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 990
TR|Q6UZF0|Q6UZF0_CVHSA                 QDVVNQNAQALNTLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 990
TR|Q6JH46|Q6JH46_CVHSA                 QDVVNQNAQALNTLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 990
TR|Q692E4|Q692E4_CVHSA                 QDVVNQNAQALNTLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 990
SP|Q3LZX1|SPIKE_BCHK3                  QDVVNQNAQALNTLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 977
SP|Q3I5J5|SPIKE_BCRP3                  QDVVNQNAQALNTLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 976
SP|Q0Q475|SPIKE_BC279                  QDVVNDNAQALNTLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 976
TR|R9QTA0|R9QTA0_CVHSA                 QDVVNQNAQALNTLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 975
TR|R9QTH3|R9QTH3_CVHSA                 QDVVNQNAQALNTLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 976
TR|A0A0K1Z074|A0A0K1Z074_CVHSA         QDVVNQNAQALNTLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 976
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA         QDVVNQNAQALNTLVKQLSSNFGAISSALNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 974
TR|A0A166ZL64|A0A166ZL64_9NIDO         QDVVNQNAQALNTLVKQLSSNFGAISSALNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 971
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA         QDVVNQNAQALNTLVKQLSSNFGAISSALNDILSRLDKVEAEVQIDRLITGRLQSLQTYV 971
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YP_009724390                           TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQSAPHGVVFLHVTYV 1068
SP|P59594|SPIKE_CVHSA                  TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQAAPHGVVFLHVTYV 1050
TR|Q6UZF4|Q6UZF4_CVHSA                 TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQAAPHGVVFLHVTYV 1050
TR|Q6UZF0|Q6UZF0_CVHSA                 TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQAAPHGVVFLHVTYV 1050
TR|Q6JH46|Q6JH46_CVHSA                 TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQAAPHGVVFLHVTYV 1050
TR|Q692E4|Q692E4_CVHSA                 TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQAAPHGVVFLHVTYV 1050
SP|Q3LZX1|SPIKE_BCHK3                  TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQSAPHGVVFLHVTYV 1037
SP|Q3I5J5|SPIKE_BCRP3                  TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQAAPHGVVFLHVTYV 1036
SP|Q0Q475|SPIKE_BC279                  TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQAAPHGVVFLHVTYV 1036
TR|R9QTA0|R9QTA0_CVHSA                 TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQAAPHGVVFLHVTYV 1035
TR|R9QTH3|R9QTH3_CVHSA                 TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQAAPHGVVFLHVTYV 1036
TR|A0A0K1Z074|A0A0K1Z074_CVHSA         TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQAAPHGVVFLHVTYV 1036
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA         TQQLIRAAEIRTSANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQSAPHGVVFLHVTYV 1034
TR|A0A166ZL64|A0A166ZL64_9NIDO         TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQSAPHGVVFLHVTYV 1031
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA         TQQLIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQSAPHGVVFLHVTYV 1031
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YP_009724390                         PAQEKNFTTAPAICHDGKAHFPREGVFVSNGTHWFVTQRNFYEPQIITTDNTFVSGNCDV 1128
SP|P59594|SPIKE_CVHSA                PSQERNFTTAPAICHEGKAYFPREGVFVFNGTSWFITQRNFFSPQIITTDNTFVSGNCDV 1110
TR|Q6UZF4|Q6UZF4_CVHSA               PSQERNFTTAPAICHEGKAYFPREGVFVFNGTSWFITQRNFFSPQIITTDNTFVSGNCDV 1110
TR|Q6UZF0|Q6UZF0_CVHSA               PSQERNFTTAPAICHEGKAYFPREGVFVFNGTSWFITQRNFFSPQIITTDNTFVSGNCDV 1110
TR|Q6JH46|Q6JH46_CVHSA               PSQERNFTTAPAICHEGKAYFPREGVFVFNGTSWFITQRNFFSPQIITTDNTFVSGNCDV 1110
TR|Q692E4|Q692E4_CVHSA               PSQERNFTTAPAICHEGKAYFPREGVFVFNGTSWFITQRNFFSPQIITTDNTFVSGKCDV 1110
SP|Q3LZX1|SPIKE_BCHK3                PSQEKNFTTAPAICHEGKAYFPREGVFVSNGTSWFITQRNFYSPQIITTDNTFVSGNCDV 1097
SP|Q3I5J5|SPIKE_BCRP3                PSQERNFTTAPAICHEGKAYFPREGVFVSNGTSWFITQRNFYSPQIITTDNTFVAGSCDV 1096
SP|Q0Q475|SPIKE_BC279                PSQERNFTTAPAICHEGKAYFPREGVFVSNGTSWFITQRNFYSPQIITTDNTFVAGNCDV 1096
TR|R9QTA0|R9QTA0_CVHSA               PSQERNFTTAPAICHEGKAYFPREGVFVSNGTSWFITQRNFYSPQIITTDNTFVAGSCNV 1095
TR|R9QTH3|R9QTH3_CVHSA               PSQERNFTTAPAICHQGKAYFPREGVFVSNGTSWFITQRNFFSPQIITTDNTFVSGNCDV 1096
TR|A0A0K1Z074|A0A0K1Z074_CVHSA       PSQEKNFTTAPAICHEGKAYFPREGVFVFNGTSWFITQRNFYSPQTITTDNTFVAGNCDV 1096
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA       PSQERNFTTAPAICHEGKAYFPREGVFVSNGSSWFITQRNFYSPQIITTDNTFVAGSCDV 1094
TR|A0A166ZL64|A0A166ZL64_9NIDO       PAQEKNFTTAPAICHEGKAYFPREGVFVSNGSSWFITQRNFYSPQIITTDNTFVAGSCDV 1091
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA       PAQEKNFTTAPAICHEGKAYFPREGVFVSNGSSWFITQRNFYSPQIITTDNTFVAGSCDV 1091
                                     *:**::*************:***:******* **: **:*****:.** ********:*.*:*

YP_009724390                         VIGIVNNTVYDPLQPELDSFKEELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNE 1188
SP|P59594|SPIKE_CVHSA                VIGIINNTVYDPLQPELDSFKEELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNE 1170
TR|Q6UZF4|Q6UZF4_CVHSA               VIGIINNTVYDPLQPELDSFKEELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNE 1170
TR|Q6UZF0|Q6UZF0_CVHSA               VIGIINNTVYDPLQPELDSFKEELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNE 1170
TR|Q6JH46|Q6JH46_CVHSA               VIGIINNTVYDPLQPELDSFKEELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNE 1170
TR|Q692E4|Q692E4_CVHSA               VIGIINNTVYDPLQPELDSFKEELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNE 1170
SP|Q3LZX1|SPIKE_BCHK3                VIGIINNTVYDPLQPELDSFKEELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNE 1157
SP|Q3I5J5|SPIKE_BCRP3                VIGIINNTVYDPLQPELDSFKEELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNE 1156
SP|Q0Q475|SPIKE_BC279                VIGIINNTVYDPLQPELDSFKEELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNE 1156
TR|R9QTA0|R9QTA0_CVHSA               VIGIINNTVYDPLQPELDSFKEELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNE 1155
TR|R9QTH3|R9QTH3_CVHSA               VIGIINNTVYDPLQPELDSFKEELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNE 1156
TR|A0A0K1Z074|A0A0K1Z074_CVHSA       VIGIINNTVYDPLQPELDSFKEELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNE 1156
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA       VIGIINNTVYDPLQPELDSFKQELDKYFKNHTSPDVDFGDISGINASVVDIQKEIDRLNE 1154
TR|A0A166ZL64|A0A166ZL64_9NIDO       VIGIINNTVYDPLQPELDSFKQELDKYFKNHTSPDVDLGDISGINASVVDIQKEIDRLNE 1151
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA       VIGIINNTVYDPLQPELDSFKQELDKYFKNHTSPDVDLGDISGINASVVDIQKEIDRLNE 1151
                                     ****:*****************:*****************:***********:**********

YP_009724390                         VAKNLNESLIDLQELGKYEQYIKWPWYIWLGFIAGLIAIVMVTIMLCCMTSCCSCLKGCC 1248
SP|P59594|SPIKE_CVHSA                VAKNLNESLIDLQELGKYEQYIKWPWYVWLGFIAGLIAIVMVTILLCCMTSCCSCLKGAC 1230
TR|Q6UZF4|Q6UZF4_CVHSA               VAKNLNESLIDLQELGKYEQYIKWPWYVWLGFIAGLIAIVMVTILLCCMTSCCSCLKGAC 1230
TR|Q6UZF0|Q6UZF0_CVHSA               VAKNLNESLIDLQELGKYEQYIKWPWYVWLGFIAGLIAIVMVTILLCCMTSCCSCLKGAC 1230
TR|Q6JH46|Q6JH46_CVHSA               VAKNLNESLIDLQELGKYEQYIKWPWYVWLGFIAGLIAIVMVTILLCCMTSCCSCLKGAC 1230
TR|Q692E4|Q692E4_CVHSA               VAKNLNESLIDLQELGKYEQYIKWPWYVWLGFIAGLIAIVMVTILLCCMTSCCSCLKGAC 1230
SP|Q3LZX1|SPIKE_BCHK3                VAKNLNESLIDLQELGKYEQYIKWPWYVWLGFIAGLIAIVMVTILLCCMTSCCSCLKGAC 1217
SP|Q3I5J5|SPIKE_BCRP3                VAKNLNESLIDLQELGKYEQYIKWPWYVWLGFIAGLIAIVMVTILLCCMTSCCSCLKGAC 1216
SP|Q0Q475|SPIKE_BC279                VAKNLNESLIDLQELGKYEQYIKWPWYVWLGFIAGLIAIVMVTILLCCMTSCCSCLKGAC 1216
TR|R9QTA0|R9QTA0_CVHSA               VAKNLNESLIDLQELGKYEQYIKWPWYVWLGFIAGLIAIVMVTILLCCMTSCCSCLKGAC 1215
TR|R9QTH3|R9QTH3_CVHSA               VAKNLNESLIDLQELGKYEQYIKWPWYVWLGFIAGLIAIVMATILLCCMTSCCSCLKGAC 1216
TR|A0A0K1Z074|A0A0K1Z074_CVHSA       VAKNLNDSLIDLQELGKYEQYIKWPWYVWLGFIAGLVGLFMAIILLCYFTSCCSCCKGMC 1216
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA       VAKNLNESLIDLQELGKYEQYIKWPWYVWLGFIAGLVGLFMAIILLCYFTSCCSCCKGMC 1214
TR|A0A166ZL64|A0A166ZL64_9NIDO       VAKNLNESLIDLQELGKYEQYIKWPWYVWLGFIAGLVGLFMAIILLCYFTSCCSCCKGMC 1211
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA       VAKNLNESLIDLQELGKYEQYIKWPWYVWLGFIAGLVGLFMAIILLCYFTSCCSCCKGMC 1211
                                     ******:*******************:*******::.:*. *:** :****** ** *

YP_009724390                         SCGSCCKFDEDDSEPVLKGVKLHYT 1273
SP|P59594|SPIKE_CVHSA                SCGSCCKFDEDDSEPVLKGVKLHYT 1255
TR|Q6UZF4|Q6UZF4_CVHSA               SCGSCCKFDEDDSEPVLKGVKLHYT 1255
TR|Q6UZF0|Q6UZF0_CVHSA               SCGSCCKFDEDDSEPVLKGVKLHYT 1255
TR|Q6JH46|Q6JH46_CVHSA               SCGSCCKFDEDDSEPVLKGVKLHYT 1255
TR|Q692E4|Q692E4_CVHSA               SCGSCCKFDEDDSEPVLKGVKLHYT 1255
SP|Q3LZX1|SPIKE_BCHK3                SCGSCCKFDEDDSEPVLKGVKLHYT 1242
SP|Q3I5J5|SPIKE_BCRP3                SCGSCCKFDEDDSEPVLKGVKLHYT 1241
SP|Q0Q475|SPIKE_BC279                SCGSCCKFDEDDSEPVLKGVKLHYT 1241
TR|R9QTA0|R9QTA0_CVHSA               SCGSCCKFDEDDSEPVLKGVKLHYT 1240
TR|R9QTH3|R9QTH3_CVHSA               SCGSCCKFDEDDSEPVLKGVKLHYT 1241
TR|A0A0K1Z074|A0A0K1Z074_CVHSA       SCGSCCRFDEDDSEPVLKGVKLHYT 1241
TR|A0A0U1WHI6|A0A0U1WHI6_CVHSA       SCGSCCRFDEDDSEPVLKGVKLHYT 1239
TR|A0A166ZL64|A0A166ZL64_9NIDO       SCGSCCRFDEDDSEPVLKGVKLHYT 1236
TR|A0A0U1UYX4|A0A0U1UYX4_CVHSA       SCGSCCRFDEDDSEPVLKGVKLHYT 1236
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