```
# Program: needle
# Rundate: Sat 8 Apr 2023 10:19:49
# Commandline: needle
    -auto
#
    -stdout
    -asequence emboss_needle-I20230408-101948-0503-30560621-p2m.asequence
#
    -bsequence emboss_needle-I20230408-101948-0503-30560621-p2m.bsequence
    -datafile EBLOSUM62
#
#
    -gapopen 10.0
#
    -gapextend 0.5
#
    -endopen 10.0
#
    -endextend 0.5
#
    -aformat3 pair
#
    -sprotein1
#
    -sprotein2
# Align_format: pair
# Report file: stdout
#
# Aligned sequences: 2
# 1: YP 009724390.1
# 2: YP_009047204.1
# Matrix: EBLOSUM62
# Gap penalty: 10.0
# Extend_penalty: 0.5
#
# Length: 1454
# Identity:
             434/1454 (29.8%)
# Similarity:
             658/1454 (45.3%)
# Gaps:
             282/1454 (19.4%)
# Score: 1564.0
#
#
YP 009724390.
                1 ----MFVFLVLL-----PLVSSQCVNLTTRTQL-----PPAYTN
                                                                 30
                     :|:.:.||
                                     ............
YP 009047204.
                1 MIHSVFLLMFLLTPTESYVDVGPDSVKSACIEVDIQQTFFDKTWPRPIDV
                                                                 50
YP 009724390.
               31 SFTRGVYYPDKVFRSSVLHSTQDLFLPF---FSNVTWFHAIHVSGTNGTK
                                                                 77
                  YP_009047204.
               51 SKADGIIYPQGRTYSNITITYQGLF-PYQGDHGDMYVYSAGHATGTTPQK
                                                                 99
YP_009724390.
               78 RF----DNPVLPF------NDGVYFASTEKSNIIR-----
                                                                102
                  .| ...|...|
                                       -:-|----|---|--|
YP_009047204.
              100 LFVANYSQDVKQFANGFVVRIGAAANSTGTVIISPSTSATIRKIYPAFML
                                                                149
              103 GWIFGTTLDSK-----TQSLLIVNNATNVVIKVCEFQFCNDPFLGVY---
YP 009724390.
                                                                144
                  YP 009047204.
              150 GSSVGNFSDGKMGRFFNHTLVLLPDGCGTLLRA--FYCILEPRSGNHCPA
                                                                197
              145 -----KNNKSWMESEFRVYSSANNCTFEY---VSQ
YP 009724390.
                                                                173
                                  198 GNSYTSFATYHTPATDCSDGNYNRNASLNSFKEYFNLRNCTFMYTYNITE
YP 009047204.
                                                                247
              174 PFLMDLEGKQGNFKNLREFVFKNIDGYFKIYSKHTPINLVRDLPQGFSAL
YP 009724390.
                                                                223
                  ..:::..|....:.:.:.|..:.|.
              248 DEILEWFGITQTAQGVHLFSSRYVDLY------
YP 009047204.
                                                                274
              224 EPLVDLPIGINITRFQTL------LALHRSYLTPGDSSSGWTAGAAA
                                                                264
YP 009724390.
                                      ..:..|..:.....|
                        |.|:.:|.||
              275 -----GGNMFQFATLPVYDTIKYYSIIPHSIRSIQSDRKAW----AA
YP 009047204.
                                                                312
YP 009724390.
              265 YYVGYLQPRTFLLKYNENGTITDAVDCALDPLSETKCTLKSFTVEKGIYQ
                                                                314
```

08/04/2023, 14:50 YP_009047204.	https://www.ebi.ac.uk/Tools/services/rest/emboss_needle/result/emboss_needle-I20313 FYVYKLQPLTFLLDFSVDGYIRRAIDCGFNDLSQLHCSYESFDVESGVYS	230408-101948-0503-3 362
YP_009724390.	315 TSNFRVQPTESIVRFPNITNLCPFGEVFNATRFASVYAWNRKRISNCVAD	364
YP_009047204.	. : : :. : . .	410
YP_009724390.	365 YSVLYNSASFSTFKCYGVSPTKLNDLCFTNVYADSFVIRGDEVRQIAPGQ	414
YP_009047204.	.:. .: .: . : : :::: .	460
YP_009724390.	415 TGKIADYNYKLPDDFTGC-VIAWNSNNLDSKVGG-NYNYLYRLFRKSNLK	462
YP_009047204.	. . :.: :: : .: : :.: : 461 AGPISQFNYKQSFSNPTCLILATVPHNLTTITKPLKYSYINKCSRLLS	508
YP_009724390.	463 PFERDISTEIYQAGSTPCNGVEGFNCYFPLQSYGFQ	498
YP_009047204.	509DDRTEVPQLVNANQYSPCVSIVPSTVWEDGDYYRKQLSPLEGGGWL	554
YP_009724390.	499 PTNGVGYQPYRVVVLSFELLHAPATVCGPKKSTNLVKNKCV	539
YP_009047204.	555 VASGSTVAMTEQLQMGFGITVQYGTDTNSVCPKLEFANDTKIASQLGNCV	604
YP_009724390.	540 NFNFNGLTGTGVLTESNKKFLPFQQFGRDIADTTDAVRDPQTLEILDITP .:: :: .	589
YP_009047204.	605 EYSLYGVSGRGVFQNCTAVGVRQQRFVYDAYQ	636
YP_009724390.	590 CSFGGVSVITPGTNTSNQVAVLYQDVNCTEVPVAIH	625
YP_009047204.	637NLVGYYSDDGNYYCLRACVSVPVSVIYDKETKTH	670
YP_009724390.	626 ADQLTPTWRVYSTGSNVFQTRAGCLIGAEHV	656
YP_009047204.	671 ÁTLFGSVACEHISSTMSQÝŚRSTRSMLKRRDSTYGPLÓTPVĠĆVLĠLV	718
YP_009724390.	657 NNSYECDIPIGAGICASYQT-QTNSPRRARSVASQSIIAYTMSLGAE	702
YP_009047204.	719 NSSLFVEDCKLPLGQSLCALPDTPSTLTPRSVRSVPGEMRLA	760
YP_009724390.	703 NSVAYSNNSIAIPTNFTISVTTEILPVSMTKTSVDCTMY	741
YP_009047204.	761 -SIAFNHPIQVDQLNSSYFKLSIPTNFSFGVTQEYIQTTIQKVTVDCKQY	809
YP_009724390.	742 ICGDSTECSNLLLQYGSFCTQLNRALTGIAVEQDKNTQEVFAQVKQIYKT : : .::: : . :	791
YP_009047204.	810 VCNGFQKCEQLLREYGQFCSKINQALHGANLRQDDSVRNLFASVKSSQSS	859
YP_009724390.	792 PPIKDFGG-FNFSQILPDPSKPSKRSFIEDLLFNKVTLADAGFIKQY	837
YP_009047204.	860 PIÍPGFGGDFNLTLLEPVSISTGSRSARSAÍEÐLLFDKVTIÁÐPGYMQGÝ	909
YP_009724390.	838 GDCLGDIAARDLICAQKFNGLTVLPPLLTDEMIAQYTSALLAGTITSG . : : . :	885
YP_009047204.	910 DDCMQQGPASARDLICAQYVAGYKVLPPLMDVNMEAAYTSSLLGSIAGVG	959
YP_009724390.	886 WTFGAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKLIANQFNSAIGKIQ . .: : . : . .	935
YP_009047204.		1009
YP_009724390.	936 DSLSSTASALGKLQDVVNQNAQALNTLVKQLSSNFGAISSVLNDILSRLD: .: . . :. .: :.	985
YP_009047204.	1010 TGFTTTNEAFQKVQDAVNNNAQALSKLASELSNTFGAISASIGDIIQRLD	1059
YP_009724390.	986 KVEAEVQIDRLITGRLQSLQTYVTQQLIRAAEIRASANLAATKMSECVLG .: .:. . .: .	1035
YP_009047204.	1060 VLEQDAQIDRLINGRLTTLNAFVAQQLVRSESAALSAQLAKDKVNECVKA	1109
YP_009724390.	1036 QSKRVDFCGKGYHLMSFPQSAPHGVVFLHVTYVPAQEKNFTTAPAIC	1082
YP_009047204.	1110 QSKRSGFCGQGTHIVSFVVNAPNGLYFMHVGYYPSNHIEVVSAYGLCDAA	1159