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```
# Program: water
# Rundate: Sat 8 Apr 2023 11:30:06
# Commandline: water
#   -auto
#   -stdout
#   -asequence emboss_water-I20230408-113003-0508-72937683-p2m.asequence
#   -bsequence emboss_water-I20230408-113003-0508-72937683-p2m.bsequence
#   -datafile EBL0SUM62
#   -gapopen 10.0
#   -gapextend 0.5
#   -aformat3 pair
#   -sprtein1
#   -sprtein2
# Align_format: pair
# Report_file: stdout
```

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# Aligned\_sequences: 2

# 1: YP\_009825051.1

# 2: YP\_009047204.1

# Matrix: EBL0SUM62

# Gap\_penalty: 10.0

# Extend\_penalty: 0.5

#

# Length: 1400

# Identity: 443/1400 (31.6%)

# Similarity: 662/1400 (47.3%)

# Gaps: 214/1400 (15.3%)

# Score: 1561.0

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YP_009825051.	3	IFLLFLTITS-----GSD-----LDRCTTFDDVQAPNYTQHTSSM	37
		:   ...  . . . : ...  .  ... ... . ..	
YP_009047204.	5	VFLLMFLLTPTESYVDVGPDSVKSACIEVDIQQTFFDKTWPRPID-VSKA	53
YP_009825051.	38	RGVYYPDEIFRSDTLYLTQDLFLPFYSNVTGFHTINHTFGNPVIPFKDGI	87
		. :.. ..... :..... .    :..... ..... .	
YP_009047204.	54	DGIIYPQGRITYSNITITYQGLF-PYQGDHGDYVYSAGHATGTTPQK---	99
YP_009825051.	88	YFAATEKSNV---VRGWV--FGSTMNNKSQSVIIINNSTNVVIRACNFEL	132
		. .  .....:  .. :  . :..   ... : : : : : : ..	
YP_009047204.	100	LFVANYSQDVKQFANGFVVRIGAAAN--STGTVIISPSTSATIRKI----	143
YP_009825051.	133	CDNPFFFAVSKPMGTQT-----HTMIF--D-----NAFNCTFE---	162
		. .  :..... :..:   :..   . : ..	
YP_009047204.	144	--YPAFMLGSSVGNFSDGKMGRFFNHTLVLLPDGCGTLLRAFYCILEPRS	191
YP_009825051.	163	-----YISDAF----SLDVSEKSGNFKH-----LREFVFKNKDGF	193
		. . . : .  :   :.. : :.....	
YP_009047204.	192	GNHCPAGNSYTSFATYHTPATDCSD--GNYNRNASLNSFKEYFNLRNCTF	239
YP_009825051.	194	LYVY-----KGYQPIDVVR----DLPSG-----FNT	215
		: .   :.. :.....   ..  :	
YP_009047204.	240	MYTYNITEDEILEWFGITQTAQGVHLFSSRYVDLYGGNMFQFATLPVYDT	289
YP_009825051.	216	LKPIFKPLPLGINITNFRAILTAFSPAQDIWGTSAAYFVGYLKPTTFMLK	265
		: ..... :.. . :.....    : :.. : : :	
YP_009047204.	290	IKYYSIIPHSIR-----SIQSDRKAW----AAFYVYKLQPLTFLLD	326
YP_009825051.	266	YDENGITITDAVDCSQNPLAELKCSVKSFEIDKGIYQTSNFRVVPSPGDVVR	315
		:... .  : : : : : : : : : : : : : : : : :	
YP_009047204.	327	FSVDGYIRRAIDCGFNDLSQLHCSYESFDVESGVYSVSSFEAKPSGSVVE	376

YP_009825051.	316	FPNITNLCPFGEVFNATKFPSVYAWERKKISNCVADYSVLNSTFFST--	363
YP_009047204.	377	QAEGVE-CDFSPLLSGTP-PQVYNFKRLVFTNC--NYNLTKLLSLFSVND	422
YP_009825051.	364	FKCYGVSATKLNLDLCSNVYADSF---VVKGDDVRQIAPGQTGVIADYN	409
YP_009047204.	423	FTCSQISPAAIASNCYSSLILDYFSYPLSMKSD---LSVSSAGPISQFN	468
YP_009825051.	410	YKLPDDFMGC-VLAWNTRNIDATSTGNYNYKYRYLRHGKLRPFERDISNV	458
YP_009047204.	469	YKQSFNPTCLILATVPHNL---TTITKPLKYSYINKCS-RLLSDDRTEV	514
YP_009825051.	459	PFSPDG---KPCTPPALNCYWPLNDY-----GFYTTTGIGYQPY	494
YP_009047204.	515	PQLVNANQYSPCVSIVPSTVWEDGDYRQKLSPLEGGGWLVASGSTVAMT	564
YP_009825051.	495	RVVVLSEFELLNAPAT---VCGPKL---STDLIKNQ---CVNFNFNGLTG	534
YP_009047204.	565	EQLQMFGGITVQYGTDTNSVC-PKLEFANDTKIASQLGNCVEYSLYGVSG	613
YP_009825051.	535	TGVL---TPSSKRFQPF--QQFGRDVSDFTDSVRDPKTSEILDISPCAFG	579
YP_009047204.	614	RGVFQNCTAVGVRQQRVYDAYQNLVGYYSD-----GNYYCLRACVSV	657
YP_009825051.	580	GVSVITPGTNASSEVAVLYQDVNCTDVSTAIHADQLTPAWR-IYSTGNV	628
YP_009047204.	658	PVSVIY--DKETKTHATLFGSVACEHISSTM--SQYSRSTRSMLKRRDST	703
YP_009825051.	629	F---QTQAGCLIGAETHVDTSY---ECDIPIGAGICASYHTVSLLRSTSQK	672
YP_009047204.	704	YGPLQTPVGCVLGL--VNSSLFVEDCKLPLGQSLCALPDTPTSTLTPRSVR	751
YP_009825051.	673	SI-----VAYTMSLGADSSIAYSNNTIAIPTNFSISITTEVMPVSMA	714
YP_009047204.	752	SVPGEMRLASIAFNHPIQVD-QLNSSYFKLSIPTNFSFGVTQEYIQTIIQ	800
YP_009825051.	715	KTSVDCNMYICGDSTECANLLLQYGSFCTQLNRALSGIAAEQDRNTREVF	764
YP_009047204.	801	KVTVDCKQYVCNGFQKCEQLLREYQGFCSKINQALHGANLRQDDSVRNLF	850
YP_009825051.	765	AQVKQMYKTPTLKYFGG-FNFSQILPDLPK---TKRSFIEDLLFNKVTL	810
YP_009047204.	851	ASVKSSQSSPIIPGFGGDFNLTLLEPVSISTGSRARSASIEDLLFDKVTI	900
YP_009825051.	811	ADAGFMKQYGECL--GDINARDLICAQKFNGLTVLPPLLTDDMIAAYTAA	858
YP_009047204.	901	ADPGYMQGYDDCMQGPASARDLICAQYVAGYKVLPLMDVNMEAAYTSS	950
YP_009825051.	859	LVSQTATAGWTFGAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKQIANQ	908
YP_009047204.	951	LLGSIAGVGWTAGLSSFAAIPFAQSIFYRLNGVGITQQVLSNQKLIANK	1000
YP_009825051.	909	FNKAISQIQESLTTTSTALGKLQDVVNQNAQALNTLVKQLSSNFGAISSV	958
YP_009047204.	1001	FNQALGAMQTGFTTTNEAFQKVQDAVNNNNAQALSKLASELSNTFGAISAS	1050
YP_009825051.	959	LNDILSRDLKVEAEVQIDRLITGRLQSLQTYVTQQLIRAAEIRASANLAA	1008
YP_009047204.	1051	IGDIIQRLDVLEQDAQIDRLINGRLTTLNAFVAQQLVRSESAALSAQLAK	1100
YP_009825051.	1009	TKMSECVLGQSKRVDFCGKGYHLSFPQAAPHGVVFLHVTYVPSQERNFT	1058
YP_009047204.	1101	DKVNECVKAQSKRSGFCGQGTHIVSFVFNAPNGLYFMHVGYYPSNHIEVV	1150
YP_009825051.	1059	TAPAIC---HEGKAYFPREGVFV-FNGT---SWFITQRNFFSPQIITTD	1100
YP_009047204.	1151	SAYGLCDAANPTNCIAPVNGYFIKTNNTTRIVDEWSYTGSSFYAPEPITSL	1200
YP_009825051.	1101	NT-FVSGNCDVVIGIINNTVYDPL--QPELDSFKEELDKYFKNHTSPDV	1146

YP_009047204.	1201	NTKYVAP--QVTYQNIISTNLPPPLLGNSTGID-FQDELDEFFKNVSTSIP	1247
YP_009825051.	1147	DLGDISGINASVVNIQKEIDRLNEVAKNLNESLIDLQELGKYEQYIKWPW	1196
YP_009047204.	1248	NFGSLTQINTTLLDLTYEMLSLQQVVKALNESYIDLKELGNYTYYNKWPW	1297
YP_009825051.	1197	YVWLGFIAGLIAIVMTILLCCMTSCCSCCLKGACSCGSCC-KFDEDDSEP	1245
YP_009047204.	1298	YIWLGFIAGLVALALCVFFILCCTGCGTNCMGKLCNRCDDRYEEDLEP	1347

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