```
1    MITNSKMENKILDEFDEEELNKLKINSNNKESTTTTTSTTTTTTTTTTSTSGEESDDEHTG PPK-Dictyostelium
1    ------------------------------------------------------------ PPK-E coli
1    ------------------------------------------------------------ PPK-P aeruginosa

61   SSSSTAAMELHRYKISQECPVDFEDDYDEESSSFDEEDEDSAAESNGGNGKLIPNPNDKK PPK-Dictyostelium
1    ------------------------------------------------------------ PPK-E coli
1    ------------------------------------------------------------ PPK-P aeruginosa

121  KKRSSKSSSKSSKSKSKSKNKETTANPVQNCQLMESGTLFSPTEFVKSSTVNPSKSPVQP PPK-Dictyostelium
1    ------------------------------------------------------------ PPK-E coli
1    ------------------------------------------------------------ PPK-P aeruginosa

181  IKLSSMLGLSELGTSNVLTVQNPQPISEPLKNDISSGSSSSSSSNNNNSNSNSNGNCNSD PPK-Dictyostelium
1    ------------------------------------------------------------ PPK-E coli
1    ------------------------------------------------------------ PPK-P aeruginosa

241  STKSKFTSLNSWDAPPLANVLPDPSYCQDIVDSENNFIVPSVKHTILDVDNLFNNLIQNT PPK-Dictyostelium
1    ------------------------------------------------------------ PPK-E coli
1    ------------------------------------------------------------MNTQQ PPK-P aeruginosa

301  NNNNNNDFKSSTMIGKPFSSGGDGSTSPLISGLSSSSIIPNGNGSLAEQQQQQQQSIPES PPK-Dictyostelium
1    ------------------------------------------------------------ PPK-E coli
6    GLDEIERIAADETVVANVESEAEVKMAETIPVETPPAVVPS------------------- PPK-P aeruginosa

                                 *       *       *   *
361  EIPIDIKVLQLSGSRMFFNRELSELIYFYRILYEAYNPTYPILERVRFIAITSQNLDMYF PPK-Dictyostelium
1    ----------MGQEKLYIEKELSWLSFNERVLQEAADKSNPLIERMRFLGIYSNNLDEFY PPK-E coli
47   ----------VDDSSLYIHRELSQLQFNIRVLEQALDESYPLLERLKFLLIFSSNLDEFF PPK-P aeruginosa

     *
421  CKRALKLRLGYISTRKTLKPE----EHYINMVLNTTRNLINEIYNIYMNILAPELSNNNV PPK-Dictyostelium
51   KVRFAELKRRIISEEQGSNS---HSRHLLGKIQSRVLKADQEFDGLYNELLLEMARNQI PPK-E coli
97   EIRIAGLKKQITFAREQAGADGLLPHQALARISELVHEQVSRQYRILNETLLPELAKHQI PPK-P aeruginosa

477  FIIKYSDLTEPEKIQLRGFFLQHVFPLMTPLVVDAGHPFPNLSNLSLNIAVLLKHDEDTT PPK-Dictyostelium
108  FLINERQLSVNQQNWLRHYFKQYLRQHITPILINPDTDLVQFLKDDYTYLAVEIIRGDTI PPK-E coli
157  RFIRRRHWTLKIKTWVRRFFRDEIAPIITPIGLDPTHPFPLLVNKSLNFIVELEGMDAFG PPK-P aeruginosa

537  RFVRIKVPQR---IPRFVHIKQRS---NYSIIPMEEIILANLDTLFP---NTKILTKSLF PPK-Dictyostelium
168  RYALLEIPSDK--VPRFVNLPPEAPRRRKPMILLDNILRYCLDDIFKGFFDYDALNAYSM PPK-E coli
217  RDSGLAIIPAPRLLPRIIRLPEDVGGEGDNYVFLSSMIHAHADDLFP---GMKVKGCYQF PPK-P aeruginosa

588  RVSRHNDLKLSGEDQANDLLELIKTELHKRKFAPMVRLEVSHNMPAEILDMLKTQLALDA PPK-Dictyostelium
226  KMTRDAEYDLVHEMEA-SLMELMSSSLKQRLTAEPVRFVYQRDMPNALVEVLREKLTISR PPK-E coli
274  RLTRNADLSVDTEDVE-DLARALRGELFSRRYGDAVRLEVVDTCPQNLTNYLLKQFGLSE PPK-P aeruginosa

648  YDVYVINGPLGLQDLFELCKLN-LPHLKFQPWVPHIPSRLVNLAKYPSEDVFSVIRKGEL PPK-Dictyostelium
285  YDSIVPGGRYHNFKDFINFPNVGKANLVNKPLPRLRHIWFDKAQFR---NGFDAIRERDV PPK-E coli
333  SELYKVSGPVNLTRLFSVTGLESHPELQYPPFTPAIPRLLQKKE-----NLFNVLSKLDV PPK-P aeruginosa

                                         *
707  LVNLPYLSFNSSVQFFIESAVKDPKVLAIKIAIYRTNSNSQLIRALCEAAS-HKEVMVLV PPK-Dictyostelium
342  LLYYPYHTFEHVLELLRQASF-DPSVLAIKINIYRVAKDSRIIDSMIHAAHNGKKVTVVV PPK-E coli
388  LLMHPFESFTPVIDLLRQAAK-DPNVLAIKQTLYRSGANSEIVDALVEAARNGKEVTAVI PPK-P aeruginosa

     *
766  DLKASGDEEQNTKFARLLEQAGCHVSYGLVGLKTHAKIAMVVREEENGLREYLNISTGNY PPK-Dictyostelium
401  ELQARFDEEANIHWAKRLTEAGVHVIFSAPGLKIHAKLFLISRKENGEVVRYAHIGTGNF PPK-E coli
447  ELRARFDEESNLQLASRLQQAGAVVIYGVVGFKTHAKMMLILRREDGELRRYAHLGTGNY PPK-P aeruginosa

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826  NASTSDVYADICLFSCDPDLGEDMCNLFNYLTGYSRVSSFKKLLIAPMNMRSTLIQLIDN PPK-Dictyostelium
461  NEKTARLYTDYSLLTADARITNEVRRVFNFIENPYRPVTFDYLMVSPQNSRRLLYEMVDR PPK-E coli
507  HAGNARLYTDYSLLTADVALCEDLHKLFNQLIGMGKTLRMKKLLHAPFTLKKNLLEMINR PPK-P aeruginosa

886  EAKNAREGKDATINAVMNGLDDKRLVNALYQASIAGVKITLVVRGRCRILPGIKGISENI PPK-Dictyostelium
521  EIANAQQGLPSGITLKLNNLVDKGLVDRLYAASSSGVPVNLLVRGMCSLIPNLEGISDNI PPK-E coli
567  EAAQAALGQPAHIMAKVNSLTDPKVIRALYKASQAGVRIDLVVRGMCCLRPGIPGVSHNI PPK-P aeruginosa

946  KVISILGRFLEHSRIYCFHNNGKPKAYIASADWLHRNLKRRVEVMVPVDDANNIKQLYEI PPK-Dictyostelium
581  RAISIVDRYLEHDRVYIFENGGDKKVYLSSADWMTRNIDYRIEVATPLLDPRLKQRVLDI PPK-E coli
627  HYRSIIGRFLEHSRIYYFLNGGDEKLYLSSADWMERNLDMRVETCFPVEGKKLVQRVKKE PPK-P aeruginosa

1006 INVYCNDSNAWEMLSDGRYKKRSSPIDEDSQTQFMNQTNQKHPVIWSK            PPK-Dictyostelium
641  IDILFSDTVKARYIDKELS-NRYVPRGNRRKVRAQLAIYDYIKSLEQPE           PPK-E coli
687  LETYLTDNTQAWVLQADGSYQRLSPTGNQNPRNTQATLLEKLAAPVLTAR          PPK-P aeruginosa
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