

human MATAEVLNIGKKLYEGKTKEVYELLDS PGKVLLQSKDQITAGNAARKN-----HLEGKA
plague -----MQKLAELYRGKAKTVYTEN-PDLLVLEFRNDTSALDQRIE-----QFDRKG
PURA_ECOLI_[sAM --GNNVVVLGTQWGDEGKGIVDLLTERAKYVVRVYQGGHNAGHTLVINGEKTVLHLIPSG
Argininosuccina -MSKSGSVVLA YSGGLDTSCILVWLKEQG YDVIAYLANIGQKEDFEEAR----KKALKLGLG
consensus --t--vlvi-a-l-egktk-vyell-epgkvvl-ykgqitagda-rin-----hl-rkg

human AISNKITSCTI-----FQLLQEAGIKTAFTRKCGETAFTIAPQCEMPIEIEWVC
plague MVNKKFNHFI-----MTKLEEAGIPTQMERLLSDTEVLVKKLEMIPVECVI
PURA_ECOLI_[sAM ILRENVTSIIIGNGVVLSPAALMKE MKELED RGIPIVRRERLLLSEACPLILDYHVALDNARE
Argininosuccina AKKVFIEDVS-----REFVEEFIWPAIQSSALYEDRYLLGTSLARPCIARK
consensus airnkitsii-----m--leeagipt--trllset-flv---emipiea--

human RRIATGSFLKRNPGVKEG-YKFYPPKVELFFKDDANNDPQWSEEQLIAAKFCFA----GL
plague RNRAAGSLVKR-LGIEEG-LSLNPPLFDLFLKNDAMHDP-----MVNESYCKT----FG
PURA_ECOLI_[sAM KARGAKAIGTTGRGIGPA-YEDKVARRGLRVGDLFDKETFAEKLEKVEYHNFQ----LV
Argininosuccina QVEIAQREGAKYVSHGATGKGNDQVRFELSCYSLAPQIKVIAPWRMPEFYNRFKGRNDLM
consensus r-raagslgkr-lgigeg-y---pprfeLflkd-a-ndp-----kmv-eyfcf-----ll

human ---LIGQTEVDIMSHATQAIFEILEKSWLPQNCTLVDMKIEFGVDVTTKEIVLADVIDND
plague ---WATEAQLARMKELSYLANDVLSKLFDDAGLILVDFKLEFG--LFNGEVVLGDEFSPD
PURA_ECOLI_[sAM NYKAEAVDYQKVLDDTMAVADILTSMVVDVSDLLDQARQRGDFVMFEGAQGTLLDIDHG
Argininosuccina EYAKQHGIPIPVTPKNPWSMDENLMHISYEAGILENPKNQAPPGLYTKTQDPAKAPNTPD
consensus -y-ka-avev--m-e-tyai-eiLsklwldaglllvd-kqefg-vv--geivladeidpd

human SWRLWPSGDRSQQKDKQSYRDLKEVTPEGLQMVKKNF EWVAERVELLLKSESQCRVVVLM
plague GSRLWDKKTILN-KMDKDRYR-----QSLGGLIEAYEEVAHRIGVKLD-----
PURA_ECOLI_[sAM TYPYVTSNNTAGGVATGSG----LGPRYVDYVLGILKAYSTRVGAGPFPTLFDDETGEF
Argininosuccina ILEIEFKKGVVVKVTNVKDG----TTHQTSLELFLMYLNEVAGKHGVGGRIDIVENRFIGMK
consensus swrlw--k-ls-kmdk-ry-----vtpqsl--vi--leeva-rvgvgl-----r-vgl-

human GSTSDLGHCEKIKKACGNFGIPCELRVTSAHKGPDET LRIKAEYEGDGIPTVVFVAVAGRS
plague -----
PURA_ECOLI_[sAM LCKQGNFEGATGRRRRRTGWLDTVAVRRAVQLNSLS GFCLTKLDVLDGLKEVKLCVAYRM
Argininosuccina SRGIYETPAGTILYHAHLIDIEAFTMDREVRKIKQGLGLKFAEL-VYTFWHSPECFVRRH
consensus -----gati-k-----i--l-r---l---glri--l-v-dgi--v-vcva-r-

human NGLGPVMSGNTAYPVISCPPLTPDWGVQDVWS SLRLPSGLGCSTVLSPEGSAQFAAQIFG
plague -----
PURA_ECOLI_[sAM PDGREVTT--TPLAADDWKGVPIYETMPG WSESTFGVKDRSGLPQAALNYIKRIEELTG
Argininosuccina CIAKSQERVEGKVQVSVLKGQVYILGRESPLSLYNEELVSMNVQGDYEPTDATGFININS
consensus --gr-v-s--t-l-v---kgl-piwg---ws-----v-----a---qi-g

human LSNHLVWSKLRASILNTWISLKQADKKIRECNL
plague -----
PURA_ECOLI_[sAM VPIDIISTGPDRTETMILRDPFDA-----
Argininosuccina LRLKEYHRLQSKVTAK-----
consensus l-i-lv-s---rs-----a-----