

Nika Escherichia coli 1 -----MISTRRRTFALLCASFIVHAAAPD-----EITTAWPNVNGEIN-
Nika Shigella boydii 1 -----MISTRRRTFALLCASFIVHAAAPD-----EITTAWPNVNGEIN-
Nika Brucella suis 1 -----MLTDRRGLMIAFAFVSFAVSGAHADP-----KKNFSWPNVNGEIN-
Nika Alkaliphilus metalliredigens 1 -----MKCNKRVVILVLALSFSIVCNTATTQASGDIGEE--KTQVYASTKDIRDN-
Nika Bacillus halodurans 1 ---MCTLNKRKILIFVSLISSIVLCAESSEGTSVNGEENTKESTFSWPRDICEIN-
Nika Helicobacter hepaticus 1 -----LRAVILVFCIVGLWE-----KNTLIMAVSENIGALN-
Ynta Shewanella pealeana 1 -----KSLILFLLSIS-----LLPLPSVASTDKVLTIA-
Ynta Methanosarcina mazei 1 ---MSSPAADSRPTQTSQVAGETALQ-----GSEELSSPGSDEL-
Ynta Salmonella typhimurium 1 MLRREKQKRLIWDKWIKMKGKLLVTCALITVTSFLFAASDTAGRTLKLA-
Co Desulfitobacterium hafniense 1 ---MKVKMKRLALWASGVLLALAGCSQDVSKGGSFASDSGEQTHLNLPSWGCFSEFYVL-
Co Clostridium tetani 1 ---MLKSSFNKNKINFNKLLALVMVSSIALSGCGTKSEKDTTKTSDSNKEI-
DdpA/Oppa Pseudomonas syringae 1 ---MKPVRVSLASALILAG-----SVSAQDLRIGYADESSLDPLQNNYAGDRS-
DdpA/Oppa Nahella chejuensis 1 -----MGRISGLRLRVLCCLSFFLTLSPSAQAQTPAN-----VLVVGQAEFPSL-
-----HAYALNDIRILIN-----YDGLIRYKDGTLN-
-----EPAL

Nika Escherichia coli 74 KSWTHSDGDKTWTFFLRDVKFNSGEPDPAEAAANRAVLDNRR-----
Nika Shigella boydii 74 KSWTHSDGDKTWTFFLRDVKFNSGEPDPAEAAANRAVLDNRR-----
Nika Brucella suis 76 ESWEASQDGSRTFKLRDVKFNSGEPDPAEAAANRAVLDNRR-----
Nika Alkaliphilus metalliredigens 84 ENHESDGDGYTYFKLRDVKFNSGEPDPAEAAANRAVLDNRR-----
Nika Bacillus halodurans 90 DSWTHSDGDKTYFKLRDVKFNSGEPDPAEAAANRAVLDNRR-----
Nika Helicobacter hepaticus 66 LSNWTSDDGLSIVLFRKGVKSGEAPNADAVINQSPILKNRARR-----
Ynta Shewanella pealeana 71 LRSNSDDRLVMSVDLRGVKSGNDCGLTASDVKFSTIAKQS-----
Ynta Methanosarcina mazei 85 TDWTHSDGDKTWTFFLRDVKFNSGEPDPAEAAANRAVLDNRR-----
Ynta Salmonella typhimurium 94 EKVDTSPDGKHWTLVFRKGVKSGDSPITAEIVTETNKAASKS-----
Co Desulfitobacterium hafniense 98 EBNSSPDGKVTYFKLRDVKFNSGEPDPAEAAANRAVLDNRR-----
Co Clostridium tetani 98 KSNWTKSKEPTWTFKLVGVKSNRGEKANAIVNFTVRYKKLKNQSNFYTFKVDK-
DdpA/Oppa Pseudomonas syringae 71 KSKWTDIT-TWTFALRDKVKDCGTETALDVFVSFERRARSVPG-----
DdpA/Oppa Nahella chejuensis 81 ESWTHSDGDKTWTFFLRKGVLDHDCAGTAPAAKFNFRITDENPHYHDTGPFPLAFFFSF-
-----EKLEADLQDLQRFVLRAPYAFETSNLYPTGLIISPDS

Nika Escherichia coli 168 QFKN-HETMNGIK-APIGTGPMVIOBSKLNQYDVFNENNYWYGKKPA----
Nika Shigella boydii 168 QFKN-HETMNGIK-APIGTGPMVIOBSKLNQYDVFNENNYWYGKKPA----
Nika Brucella suis 170 QFKN-GGTADGIV-APITGCPKMTITKLGEHDFVFNENNYWYGKKPA----
Nika Alkaliphilus metalliredigens 178 SFID-GNTKEGVN-GYIGTGPMVIOBSKLNQYDVFNENNYWYGKKPA----
Nika Bacillus halodurans 184 QFGDDGTSQGIK-EPITGCPMMSIKSGYDEYAVFNENNYWYGKKPA----
Nika Helicobacter hepaticus 160 AMPDKDLQLLQHNRP-PIGTCGAPMMSIKSGYDSTLIPNPHYNQDAYNGIYDEH-
Ynta Shewanella pealeana 171 ASYG-AQYGL-----KPIGCGPFLVFRWDRNKGQVLEPNFYDGCKPEY--
Ynta Methanosarcina mazei 171 HAYNCTATYGS-----NBAEGGCPKFEVQWDRNKGQVLEPNFYDGCKPEY--
Ynta Salmonella typhimurium 180 SRYDEKTF-----EPITGCPMFLVFSQFGQGLVAPNFWAKCKND-----
Co Desulfitobacterium hafniense 194 LQNGDLTKADSFSTTVSYGCPMVGDDGGDKKYTVFNPHYNGKCKND-----
Co Clostridium tetani 189 FGKDGNFIVD-----KNNFGCPKMTITKLGEHDFVFNENNYWYGKKPA----
DdpA/Oppa Pseudomonas syringae 162 AGKAASSADYNSGKALIGTGCPMRFVSFVPGDRTFARNSYWGAFTT-----
DdpA/Oppa Nahella chejuensis 181 VKKYADYGR-----HAGTGPFRFABVWSNKAIVFNENNYWYGKAPP-----
-----LEAVVFSEITDANTIRMAEILSGVLDLWVETPP-----NLAV

Nika Escherichia coli 254 FSQNPANHHQISQIEIVMLAXNNAKAPIN-----
Nika Shigella boydii 254 FSQNPANHHQISQIEIVMLAXNNAKAPIN-----
Nika Brucella suis 256 FQKMLINNEISQIELEIRVLAANNNGCAKID-----
Nika Alkaliphilus metalliredigens 265 PEDRGKIVVSEIARVILANSNGEITGCO-----
Nika Bacillus halodurans 270 KSESQAGDLSVEGVRSLLNLSNKEKIA-----
Nika Helicobacter hepaticus 250 QNDKPHNYSIPSYITIVINSRSPFLTSLNKEKSPNRRKALALIDKTKTQAV-
Ynta Shewanella pealeana 246 WDRKIDAWPMATQADN-----ICNDVDS-----
Ynta Methanosarcina mazei 261 DARGTSIFMFMNPTGKTEGNTYICNDVSD-----
Ynta Salmonella typhimurium 271 ENRGKIVFMPM-AGKKDANPYVPCNDVAD-----
Co Desulfitobacterium hafniense 282 KNTKCPGAADVKAITQYIYGYKLNKFNPA-----
Co Clostridium tetani 272 LKDSKESSEKSTINHLISNGTTFPNN-----
DdpA/Oppa Pseudomonas syringae 258 QGLRDLIQPSFRTPGNEFRIDNAKFPAAEN-----
DdpA/Oppa Nahella chejuensis 261 FEKDPGQVYQAGPGLWELIINNKGGPFA-----
-----RRRQALNNAIDRKALVENLQGTAEIATGPPAPAFAYNTNIDTYANPDKARALIKAAGR

Nika Escherichia coli 347 TPAKDKIREKNGOPHILSLSIGTDALSNAEITQADMROICADVSIGESSEIYARQ--
Nika Shigella boydii 347 TPAKDKIREKNGOPHILSLSIGTDALSNAEITQADMROICADVSIGESSEIYARQ--
Nika Brucella suis 349 TAKASGIREKNGOPHILSLSIGTDALSNAEITQADMROICADVSIGESSEIYARQ--
Nika Alkaliphilus metalliredigens 358 TIGN-DCGYIKKCAKAEITVYNSDNSQERMSIYMDNLSQANNGKIKVGEKQAFLEDSQ--
Nika Bacillus halodurans 363 EIPAKTIREKNGEPEELIDKTDPLQMAEITQADMROICADVSIGESSEIYARQ--
Nika Helicobacter hepaticus 349 LQDSQAAILD-----RGVTHISGDNPAEAEITQSEITAGICKARSSEPTTYRNL-----
Ynta Shewanella pealeana 332 QTKQKR-----RYRDSVVAASVYIYLAGDTVRQOALAAQVMRPLGCTKPEK-
Ynta Methanosarcina mazei 353 DTDGCHVEKSLDKAEFTLLPANAGQFALVSGEBAKGLGNKNEKMSWDEITYLC-----
Ynta Salmonella typhimurium 362 KNSBG-VREKAKAEARILVWASGDSRTDADAPAMQFLGIVLSQSGSWEVERHM-----
Co Desulfitobacterium hafniense 373 VDRDDEKREINCRTPAAEFVYSGESVANDNVVYICDQFQKIGVETPKSAPMMEWYAMI-----
Co Clostridium tetani 363 -----GKNTNVTMTIPSEFTKKYPYIEEAYIYSGVSEELGANNVNIYFAPFNQIR-----
DdpA/Oppa Pseudomonas syringae 355 PEG-----FOLTVHVPGDRYPQAPETQQAQAFWTRIGKVKQEVLPVWAYAGANKNEISVFA-
DdpA/Oppa Nahella chejuensis 355 EGAQLTFYTYTEGSGGLEPFAIG-----AAQADILAKVGLCKVGVTYEWNELFSLVNGPLDQAEAMANNNDP-
-----ETLALRSDAWMPDKGFG

Nika Escherichia coli 444 QGLADKPLIDKEIGELAHDEACQCALYRDIIT--RHDEAVYIPLSYSMVYVSKPE-
Nika Shigella boydii 444 QGLADKPLIDKEIGELAHDEACQCALYRDIIT--RHDEAVYIPLSYSMVYVSKPE-
Nika Brucella suis 446 QGLCPDKAKIDAEIGQVLVDDEPACALYKDIIT--RHDEAVYIPLSYSMVYVSKPE-
Nika Alkaliphilus metalliredigens 454 VPLEKKAWDEAGNMIETDENTRCEIYNEIIT--YHCAASVYIPLYSRTKAWEPS-
Nika Bacillus halodurans 460 HSNLSMKBEDEQARATLADDEPERCEIGYSLTN--TQOSVFVPSYKKTIVYQENNEFI-
Nika Helicobacter hepaticus 443 EQLQCPKPHKIDREILALNPLS-VVYFSLASEVALTQOSGVYIPLTYQRNVI-
Ynta Shewanella pealeana 426 YSNPEVDRAISQAQAASVESLSPHYQQAAL-----
Ynta Methanosarcina mazei 450 YNNPVDNYTRITLTPSDQEAANKNGLAAMVGTGSGSAEGDQSMWATN-
Ynta Salmonella typhimurium 457 YSNPAVEAHKQADAPDQKAIFFYQEWGKGAGGOGDPAALAMLNQHTYANP-
Co Desulfitobacterium hafniense 472 MCGGLPQGVNLNENSLDEARIEIYATIN--TIANQCNVPLFYTHQAN-
Co Clostridium tetani 451 YHFQYKNDKINLNNKDEILLEKRAAYDTELQS-----ISAKPSTPLFSENN-
DdpA/Oppa Pseudomonas syringae 444 YGHYSNPLVCKAADSTAEDEKARKKILELSQ-----VSSDVGILPLFYQN-
DdpA/Oppa Nahella chejuensis 445 NSQYANPVLIDLERARRATQDERATYKGVQF-----IIEEDAPFAAFANWKQNA-
-----SNTRKFNFKLPQSFLLDTAVNKL