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NTDB id 600 KW2 RS01765 WP 011675413.1	MATKK....KTNFDDITKKYGAERDKALADALALIEKD FGKGSIMRLGEA..ANQKVS VSSGSLALDI ALGAGGYPKG	73
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAKK....PKKLEEISKKFGAEREKALNDALKLIEKD FGKGSIMRLGER..AEQKVQVMSSGSLALDI ALGSGGYPKG	72
NTDB id 228 SPD RS09265 WP 001085462.1	.MAKK....PKKLEEISKKFGAEREKALNDALKLIEKD FGKGSIMRLGER..AEQKVQVMSSGSLALDI ALGSGGYPKG	72
NTDB id 194 SPR RS08825 WP 001085462.1	.MAKK....PKKLEEISKKFGAEREKALNDALKLIEKD FGKGSIMRLGER..AEQKVQVMSSGSLALDI ALGSGGYPKG	72
NTDB id 159 SP RS09750 WP 001085462.1	.MAKK....PKKLEEISKKFGAEREKALNDALKLIEKD FGKGSIMRLGER..AEQKVQVMSSGSLALDI ALGSGGYPKG	72
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAKK....PKKLDEISKKFGAEREKALNDALKLIEKD FGKGSIMRLGER..AEQKVQVMSSGSLALDI ALGSGGYPKG	72
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAKK....PKKLDEISKKFGAEREKALNDALKLIEKD FGKGSIMRLGER..AEQKVQVMSSGSLALDI ALGSGGYPKG	72
NTDB id 453 Spy49 1753c ACI62003.1	.MAKK....LKKNEEITKKFGDERRKALDDALKNIEKD FGKGA VMRLGER..AEQKVQVMSSGSLALDI ALGAGGYPKG	72
NTDB id 408 SMU RS09530 WP 002262392.1	.MAKR....IKKTEEITKKFGDERRKALDDALKNIEKD FGKGA VMRLGER..AEQKVQVMSSGSLALDI ALGAGGYPKG	72
NTDB id 625 LCA RS02525 WP 011374196.1	.....MAKD ERQAALDAALKKIEKN FGKGSIMRMGEK..VDTQVSTVSSGSLALDEALGVGGYPRG	59
NTDB id 115 BSU 16940 NP 389576.2	.....MS DRQAALDMALKQIEKQFGKGSIMKLG EK..TDTRISTVPSGSLALDTALGIGGYPRG	57
NTDB id 1313 DR RS12030 WP 010888966.1	.....MSKDATKEISAPTD AKERSKATETAMSQIEKAFGKGSIMKLGAE..SKLDVQVVSTGSLSLDLALGVGGIPRG	71
NTDB id 384600 FOU60 RS42320 WP 395808610.1	.....MAVNP EKEKATIELAMSAVERQFGKGSIMRLGN EEP LVRDVQAISTGSLSLDI ALGVGGVPRG	62
NTDB id 1245 Cj1673c YP 002345041.1	.....MDDNKRKSLDAALKS LDKTFGKGTILRLGDK..EVEQIDSIGTGSVGLDLALGIGGVPRG	58
NTDB id 1214 NCTC11637 00359 SQJ03206.1	.....MAIDE DKQKATISLAIKQIDKVF GKGALVRLGDK..QVEKIDAISTGSLGLDLALGIGGVPRG	60
NTDB id 1211 C694 RS00795 WP 000963128.1	.....MAIDE DKQKATISLAIKQIDKVF GKGALVRLGDK..QVEKIDSISTGSLGLDLALGIGGVPRG	60
NTDB id 1334 RAOC RS04870 WP 004918236.1	.....MAKT..ETTSPND DKKKALAAVLEKLDKT YGKGTVMKLGDT..VDHNI EVIPSGSLGLDLALGVGGYPRG	67
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKSSKNNTV..VKQVEPEQKKQALEAALAQIEKQFGKGSIMKLGQT..EQLDIESVSTGSLGLDLALGIGGLPMG	75
NTDB id 1130 NGFG RS03960 WP 003688695.1	.....MSD DKSKALAAALAQIEKSF GKGAIMKMDGSQ..QEENLEVISTGSLGLDLALGVGGLPRG	59
NTDB id 1124 NGFG RS03960 WP 003688695.1	.....MSD DKSKALAAALAQIEKSF GKGAIMKMDGSQ..QEENLEVISTGSLGLDLALGVGGLPRG	59
NTDB id 1123 OK783 RS03845 WP 003688695.1	.....MSD DKSKALAAALAQIEKSF GKGAIMKMDGSQ..QEENLEVISTGSLGLDLALGVGGLPRG	59
NTDB id 1427 RS RS02760 WP 011000510.1	.MEDG.....K..KAASMSAEKQKALAAALAQIEKQFGKGSIMKMGDA..EVEPVQVVSTGSLGLDVALGVGGLPRG	67
NTDB id 1165 A1552VC RS01565 WP 000344154.1	.....MDENKQKALAAALGQIEKQFGKGSIMRLGDN..RAMDVETISTGSLSLDI ALGAGGLPMG	58
NTDB id 1142 GTF74 RS11550 WP 000344154.1	.....MDENKQKALAAALGQIEKQFGKGSIMRLGDN..RAMDVETISTGSLSLDI ALGAGGLPMG	58
NTDB id 1205 PSJM300 05545 AFN77183.1	.....MDENKKRALAAALGQIEKQFGKGA VMRMGDH..DRQAIPSI STGSLGLDI ALGIGGLPKG	58
NTDB id 1022 ACIAD RS06390 WP 004925639.1	.....MDDNKS KALQAALSQIEKQFGKNTVMRLGDN..TVQAVEAVSTGSLTLDI ALGIGGLPKG	58
NTDB id 1074 ABD1 RS10195 WP 000344167.1MDENKS KALQAALSQIEKQFGKNTVMRLGDN..TVQAVEAVSTGSLTLDI ALGIGGLPKG	58
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 NTDB id 159 SP RS09750 WP 001085462.1
 NTDB id 527 SMSK321 RS11065 WP 001085454.1
 NTDB id 499 SM12261 RS08315 WP 078228268.1
 NTDB id 453 Spy49 1753c ACI62003.1
 NTDB id 408 SMU RS09530 WP 002262392.1
 NTDB id 625 LCA RS02525 WP 011374196.1
 NTDB id 115 BSU 16940 NP 389576.2
 NTDB id 1313 DR RS12030 WP 010888966.1
 NTDB id 384600 FOU60 RS42320 WP 395808610.1
 NTDB id 1245 Cj1673c YP 002345041.1
 NTDB id 1214 NCTC11637 00359 SQJ03206.1
 NTDB id 1211 C694 RS00795 WP 000963128.1
 NTDB id 1334 RAOC RS04870 WP 004918236.1
 NTDB id 1389 A4U84 RS07560 WP 021112712.1
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 NTDB id 1142 GTF74 RS11550 WP 000344154.1
 NTDB id 1205 PSJM300 05545 AFN77183.1
 NTDB id 1022 ACIAD RS06390 WP 004925639.1
 NTDB id 1074 ABD1 RS10195 WP 000344167.1



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 NTDB id 1205 PSJM300 05545 AFN77183.1
 NTDB id 1022 ACIAD RS06390 WP 004925639.1
 NTDB id 1074 ABD1 RS10195 WP 000344167.1

consensus



NDEKIGQGA**AKAKNYLKEHQDVFDEIDHKVRAAHGL**LDLDDSEVAETE..EETTAS³⁸⁷TKAKAKKEEKAVETEEIELELED..
 KDEKIGQGS**ENAKKYLAEHPEIFDEIDKQVRSKFG**LIDGEEVSEQD..TENKK**DE**...PKKEEA..VNEEVPLDLGDEL 382
 KDEKIGQGS**ENAKKYLAEHPEIFDEIDKQVRSKFG**LIDGEEVSEQD..TENKK**DE**...PKKEEA..VNEEVPLDLGDEL 382
 KDEKIGQGS**ENAKKYLAEHPEIFDEIDKQVRSKFG**LIDGEEVSEQD..TENKK**DE**...PKKEEA..VNEEVPLDLGDEL 382
 KDEKIGQGS**ENAKKYLAEHPEIFDEIDKQVRSKFG**LIDGEEVSEQD..TENKK**DE**...PKKEEA..VNEEVPLDLGDEL 382
 KDEKIGQGS**ENAKKYLAENPEVFAEIDHQVVRVQFGL**LIDGEEAAE.....SKK**DE**...VAQVDS..VNEEVTLDLGDEL 378
 KDEKIGQGS**ENAKKYLAENPEIFDEIDHQVVRVQFGL**LIDGEEIAE.....SKK**DE**...AAQVDS..VNEEVTLDLGDEL 378
 NGEKIGQGS**ENAKRYLADHPQLFDEIDRKRVRVKFGL**LEESEEEESAM..AVASE.....E.....TDDLALDLNGI 374
 NGEKIGQGS**ENAKKFLADNPEIFDDIDHKVVRVQYGL**IEEDNTEEKQ..SSKEK.....ETDEK..ADKNLVLELD³⁷⁹DTI
 GSERIGQGR**ENAKNYLADHEDVEDEVRLKVRRAAYG**ISDVPEEDLPT..TEDE.QI.NILPDDST.....EE..... 355
 EEERLGQGR**ENAKQFLKENKDIMLMIQEIQIREHYGL**DNNGVVVQQA..EETQE**EL**.EFE.E..... 348
 GDERIGQGR**KEKTIAYTAERP**EME**QEIRDRVMAAIRAGNAGEAPALAPAPA**AEAA.EA..... 363
 KGERIGQGR**ENAKDYLRDHPEVRVDVEKQVLDKYGI**TGKPAVA..AAPAPAEAEAP.AEGHTEKR.....QRVKAVK... 364
 KDKKLGQGR**ENSKAFLKENPEIADEITKAIQNSMG**IEGMISG..SEDDE..GEE..... 343
 QDKKLGQGR**ENAKALLKEDKALADEITLTKESIGS**NEEIMP..LPDEP..LEEM.E..... 347
 QDKKLGQGR**ENAKALLKEDKALADEITLTKESIGS**NEEIMP..LPDEP..LEEM.E..... 347
 QDTKLGQGR**DTVKELTKDNPELAEELEAKIREKLQAK**..... 343
 DGTKIGQGR**KNNAVKWLKENPEIADKLEQEIRNTL**ASNPN**SVL**..KATASDSN**DES**.DVVEEFSEE.....EL..... 372
 NGAKIGQGR**KDNVRVWLKENPEISDEIDAKIRALNG**VEMHITE..GT.....QDE.TDGERPEE..... 348
 NGAKIGQGR**KDNVRVWLKENPEISDEIDAKIRALNG**VEMHITE..GT.....QDE.TDGERPEE..... 348
 NGAKIGQGR**KDNVRVWLKENPEISDEIDAKIRALNG**VEMHITE..GT.....QDE.TDGERPEE..... 348
 NGERIGQGR**DNCRREFLRENAELAREIENKVR**REHLGVTPMGAV..TLAEEVEED..... 352
 NGDKIGQGR**KANACKYLNKENPEIAKTLDKKLREMLLN**PNEN**QML**..IAETSSAADDV.EFGAVPEE.....F..... 354
 NGDKIGQGR**KANACKYLNKENPEIAKTLDKKLREMLLN**PNEN**QML**..IAETSSAADDV.EFGAVPEE.....F..... 354
 KGSKIGQGR**KANAACKYLEENPEIGQIEEQ**IRAKLLVTSANTK..ATPVAEDL**DA**.DI..... 347
 QGNKIGQGR**KNNVIRYLEENPQISTEIEAVIREQLL**TKASDQT..AA.HDETEEP.DLL..ES..... 349
 QGNKIGQGR**KNNVIRYFEENNQIAEEIERNIREQLL**TTGTNGA..VQ.I.EDEEP.DLL..LES..... 349

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NTDB id 600 KW2 RS01765 WP 011675413.1	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	E	I	E	I	E	E	388
NTDB id 228 SPD RS09265 WP 001085462.1	E	I	E	I	E	E	388
NTDB id 194 SPR RS08825 WP 001085462.1	E	I	E	I	E	E	388
NTDB id 159 SP RS09750 WP 001085462.1	E	I	E	I	E	E	388
NTDB id 527 SMSK321 RS11065 WP 001085454.1	E	I	E	I	E	E	384
NTDB id 499 SM12261 RS08315 WP 078228268.1	E	I	E	I	E	E	384
NTDB id 453 Spy49 1753c ACI62003.1	E	I	E	D	.	.	378
NTDB id 408 SMU RS09530 WP 002262392.1	E	L	E	D	.	.	383
NTDB id 625 LCA RS02525 WP 011374196.1	355
NTDB id 115 BSU 16940 NP 389576.2	348
NTDB id 1313 DR RS12030 WP 010888966.1	363
NTDB id 384600 FOU60 RS42320 WP 395808610.1	364
NTDB id 1245 Cj1673c YP 002345041.1	343
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NTDB id 1074 ABD1 RS10195 WP 000344167.1	349

consensus

 non conserved
 similar
 ≥ 50% conserved