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NTDB id 600 KW2 RS01765 WP 011675413.1	MATKK.....KTNFDDITKKYGAERDKALADALALIEKDFGKGSIMRLGEA.ANQKVS	74
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAKK.....PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR	73
NTDB id 228 SPD RS09265 WP 001085462.1	.MAKK.....PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR	73
NTDB id 194 SPR RS08825 WP 001085462.1	.MAKK.....PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR	73
NTDB id 159 SP RS09750 WP 001085462.1	.MAKK.....PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR	73
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAKK.....PKKLDEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR	73
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAKK.....PKKLDEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR	73
NTDB id 408 SMU RS09530 WP 002262392.1	.MAKR.....IKKTEEITKKFGDERRKALDDALKNIEKDFGKGAVMRLGER.AEQKVQVMSSGSLALDIALGAGGYPKGR	73
NTDB id 453 Spy49 1753c ACI62003.1	.MAKK.....LKKNEEITKKFGDERRKALDDALKNIEKDFGKGAVMRLGER.AEQKVQVMSSGSLALDIALGAGGYPKGR	73
NTDB id 115 BSU 16940 NP 389576.2	.....MSDRQAALDMALKQIEKQFGKGSIMKLGEK.TDTRISTVPSGSLALDTALGIGGYPGR	58
NTDB id 625 LCA RS02525 WP 011374196.1	.....MAKDERQAALDAALKKIEKNFGKGSIMRMGEK.VDTQVSTVSSGSLALDEALGVGGYPRGR	60
NTDB id 1313 DR RS12030 WP 010888966.1	.....MSKDATKEISAPTDAKERSKATETAMSQIEKAFGKGSIMKLGAE.SKLDVQVVSTGSLSLDLALGVGGIPRGR	72
NTDB id 1245 Cj1673c YP 002345041.1	.....MDNKRKSLDAALKSLDKTFGKGTILRLGDK.EVEQIDSIGTGSVGLDLALGIGGVPRGR	59
NTDB id 1214 NCTC11637 00359 SQJ03206.1	.....MAIDEDKQKATSLAIKQIDKVFGKCALVRLGDK.QVEKIDAISTGSLGLDLALGIGGVPRGR	61
NTDB id 1211 C694 RS00795 WP 000963128.1	.....MAIDEDKQKATSLAIKQIDKVFGKCALVRLGDK.QVEKIDSISTGSLGLDLALGIGGVPRGR	61
NTDB id 1334 RAOC RS04870 WP 004918236.1	.....MAKT..ETTSPNDDKKKALAAVLEKLDKTYGKGTVMKLGDTVDHNIIEVIPSGSLGLDLALGVGGYPKGR	68
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKKSSKNNTV..VKQVEPEQKKQALEAALAQIEKQFGKGSIMKLGQT.EQLDIESVSTGSLGLDLALGIGGLPMGR	76
NTDB id 1130 NGFG RS03960 WP 003688695.1	.....MSDDKSKALAAALAQIEKSFGKGAIMKMDGSQQEENLEVIISTGSLGLDLALGVGGLPRGR	60
NTDB id 1124 NGFG RS03960 WP 003688695.1	.....MSDDKSKALAAALAQIEKSFGKGAIMKMDGSQQEENLEVIISTGSLGLDLALGVGGLPRGR	60
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NTDB id 1427 RS RS02760 WP 011000510.1	.MEDG.....K..KAASMSAEKQKALAAALAQIEKQFGKGSIMKMGDA.EVEPVQVVSTGSLGLDVALGVGGLPRGR	68
NTDB id 1165 A1552VC RS01565 WP 000344154.1	.....MDENKQKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGR	59
NTDB id 1142 GTF74 RS11550 WP 000344154.1	.....MDENKQKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGR	59
NTDB id 1022 ACIAD RS06390 WP 004925639.1	.....MDNKSALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGR	59
NTDB id 1074 ABD1 RS10195 WP 000344167.1	.....MDENKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGR	59
NTDB id 1020520 AAFM42 RS16760 WP 017137075.1	.....MDNKKKALAAALGQIERQFGKGAVMRMGDH.DRQAIPAISTGSLGLDIALGIGGLPKGR	59
NTDB id 1205 PSJM300 05545 AFN77183.1	.....MDENKKRALAAALGQIEKQFGKGAVMRMGDH.DRQAIPSIISTGSLGLDIALGIGGLPKGR	59
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NTDB id 600 KW2 RS01765 WP 011675413.1	I V E I Y G P E S S G K T T V A L H A V A A V Q K E G G I A A F I D A E N A L D P E Y A K A L G V N I D E L L S Q P D Y G E Q G L Q I A E K L I T S G A V D L	154
NTDB id 269 KZH43 RS08665 WP 001085462.1	I I E I Y G P E S S G K T T V A L H A V A A Q A Q K E G G I A A F I D A E H A L D P A Y A A A L G V N I D E L L S Q P D S G E Q G L E I A G K L I D S G A V D L	153
NTDB id 228 SPD RS09265 WP 001085462.1	I I E I Y G P E S S G K T T V A L H A V A A Q A Q K E G G I A A F I D A E H A L D P A Y A A A L G V N I D E L L S Q P D S G E Q G L E I A G K L I D S G A V D L	153
NTDB id 194 SPR RS08825 WP 001085462.1	I I E I Y G P E S S G K T T V A L H A V A A Q A Q K E G G I A A F I D A E H A L D P A Y A A A L G V N I D E L L S Q P D S G E Q G L E I A G K L I D S G A V D L	153
NTDB id 159 SP RS09750 WP 001085462.1	I I E I Y G P E S S G K T T V A L H A V A A Q A Q K E G G I A A F I D A E H A L D P A Y A A A L G V N I D E L L S Q P D S G E Q G L E I A G K L I D S G A V D L	153
NTDB id 527 SMSK321 RS11065 WP 001085454.1	I I E I Y G P E S S G K T T V A L H A V A A Q A Q K E G G I A A F I D A E H A L D P A Y A A A L G V N I D E L L S Q P D S G E Q G L E I A G K L I D S G A V D L	153
NTDB id 499 SM12261 RS08315 WP 078228268.1	I I E I Y G P E S S G K T T V A L H A V A A Q A Q K E G G I A A F I D A E H A L D P A Y A A A L G V N I D E L L S Q P D S G E Q G L E I A G K L I D S G A V D L	153
NTDB id 408 SMU RS09530 WP 002262392.1	I V E I Y G P E S S G K T T V A L H A V A A Q A Q K D G G I A A F I D A E H A L D P A Y A A A L G V N I D E L L S Q P D S G E Q G L E I A G K L I D S G A V D L	153
NTDB id 453 Spy49 1753c ACI62003.1	I I E I Y G P E S S G K T T V A L H A V A A Q A Q K E G G I A A F I D A E H A L D P A Y A A A L G V N I D E L L S Q P D S G E Q G L E I A G K L I D S G A V D L	153
NTDB id 115 BSU 16940 NP 389576.2	I I E V Y G P E S S G K T T V A L H A I A E V Q Q Q G G Q A A F I D A E H A L D P V Y A Q K L G V N I E E L L S Q P D T G E Q A L E I A E A L V R S G A V D I	138
NTDB id 625 LCA RS02525 WP 011374196.1	I V E I Y G P E S S G K T T V A L H A V A E V Q K Q G G T A A Y I D A E N A M D P K Y A T A L G V N I D D L L S Q P D T G E Q G L E I A D A L V S S G A V D I	140
NTDB id 1313 DR RS12030 WP 010888966.1	I T E I Y G P E S G G K T T L A L A I V A Q A Q K A G G T C A F I D A E H A L D P V Y A R A L G V N T D E L L V S Q P D N G E Q A L E I M E L L V R S G A I D V	152
NTDB id 1245 Cj1673c YP 002345041.1	I I E I Y G P E S S G K T T L T L H I I A E C Q K A G G V C A F I D A E H A L D V K Y A K N L G V N T D D L Y V S Q P D F G E Q A L E I V E T I A R S G A V D L	139
NTDB id 1214 NCTC11637 00359 SQJ03206.1	I I E I Y G P E S S G K T T L S L H I I A E C Q K N G G V C A F I D A E H A L D V H Y A K R L G V D T E N L L V S Q P D T G E Q A L E I L E T I T R S G G I D L	141
NTDB id 1211 C694 RS00795 WP 000963128.1	I I E I Y G P E S S G K T T L S L H I I A E C Q K N G G V C A F I D A E H A L D V H Y A K R L G V D T E N L L V S Q P D T G E Q A L E I L E T I T R S G G I D L	141
NTDB id 1334 RAOC RS04870 WP 004918236.1	I V E I Y G P E S S G K T T L T L H A I A E A Q K V G G T A A F I D A E H A F D M H Y A E K L G I N L E E L I V S Q P D N G E Q A L E I A D S L I R S G G V D I	148
NTDB id 1389 A4U84 RS07560 WP 021112712.1	I V E I Y G P E S S G K T T L T L S L I A Q A Q K G N K T C A F I D A E H A L D P V Y A R N L G V N T D E L L S Q P D N G E Q A L E I C D A L V R S G A V D V	156
NTDB id 1130 NGFG RS03960 WP 003688695.1	I V E I F G P E S S G K T T L C L E A V A Q C Q K N G G V C A F V D A E H A F D P V Y A R K L G V K V E E L Y L S Q P D T G E Q A L E I C D T L V R S G G I D M	140
NTDB id 1124 NGFG RS03960 WP 003688695.1	I V E I F G P E S S G K T T L C L E A V A Q C Q K N G G V C A F V D A E H A F D P V Y A R K L G V K V E E L Y L S Q P D T G E Q A L E I C D T L V R S G G I D M	140
NTDB id 1123 OK783 RS03845 WP 003688695.1	I V E I F G P E S S G K T T L C L E A V A Q C Q K N G G V C A F V D A E H A F D P V Y A R K L G V K V E E L Y L S Q P D T G E Q A L E I C D T L V R S G G I D M	140
NTDB id 1427 RS RS02760 WP 011000510.1	V V E I Y G P E S S G K T T L T L Q V V A E M Q K L G G T C A F I D A E H A L D V T Y A D K L G V K V P D L L I S Q P D T G E Q A L E I A D A L V R S G S V D L	148
NTDB id 1165 A1552VC RS01565 WP 000344154.1	I V E I F G P E S S G K T T L T L E L I A A A Q R E G K T C A F I D A E H A L D P V Y A K K L G V N I D E L L V S Q P D T G E Q A L E I C D A L A R S G A V D V	139
NTDB id 1142 GTF74 RS11550 WP 000344154.1	I V E I F G P E S S G K T T L T L E L I A A A Q R E G K T C A F I D A E H A L D P V Y A K K L G V N I D E L L V S Q P D T G E Q A L E I C D A L A R S G A V D V	139
NTDB id 1022 ACIAD RS06390 WP 004925639.1	I V E I Y G P E S S G K T T M T L Q A I A Q C Q K A G G T C A F I D A E H A L D P Q Y A R K L G V D I D N L L V S Q P D H G E Q A L E I A D M L V R S G A I D L	139
NTDB id 1074 ABD1 RS10195 WP 000344167.1	I I E I Y G P E S S G K T T M T L Q A I A Q C Q K S G G T C A F I D A E H A L D P Q Y A R K L G V D I D N L L V S Q P D N G E Q A L E I A D M L V R S G A I D L	139
NTDB id 1020520 AAFM42 RS16760 WP 017137075.1	I V E I Y G P E S S G K T T L T L S V I A Q A Q K M G A T C A F V D A E H A L D P E Y A G K L G V N V D D L L V S Q P D T G E Q A L E I T D M L V R S N A I D V	139
NTDB id 1205 PSJM300 05545 AFN77183.1	I V E I Y G P E S S G K T T L T L S V I A A A Q R M G S T C A F V D A E H A L D P D Y A G K L G V N V D D L L V S Q P D T G E Q A L E I T D M L V R S N A V D V	139
consensus	**!*!!!!!!*!!!!* ! **! !* ** !*!!!!!!*!! !!!!!*!!!!*!! !!!!!*!!!!*!! *!!!!*!!!!*	





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 NTDB id 269 KZH43 RS08665 WP 001085462.1  
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 NTDB id 1334 RAOC RS04870 WP 004918236.1  
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 NTDB id 1022 ACIAD RS06390 WP 004925639.1  
 NTDB id 1074 ABD1 RS10195 WP 000344167.1  
 NTDB id 1020520 AAFM42 RS16760 WP 017137075.1  
 NTDB id 1205 PSJM300 05545 AFN77183.1  
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NTDB id 1020520 AAFM42 RS16760 WP 017137075.1	...	352
NTDB id 1205 PSJM300 05545 AFN77183.1	...	347

consensus

 non conserved  
 similar  
 ≥ 50% conserved