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NTDB id 115 BSU 16940 NP 389576.2	SVRLDVRRAEQLKQGN....DVMGNKTKIKVVKNKVAPPFR	TA	EVDIMY	GEGISKE	GELIDL	GLTELDIV	QKSG	SWYSY	E	292	
NTDB id 1151093 KKQ94 RS13005 WP 002287328.1	TIRLEVRRAEQLKQGT....DIVGNRTKIKVVKNKVAPPFK	IA	EVDV	MYGLGIS	QEGEL	LDMAVEK	DI	VDKSG	AWYSYK	293	
NTDB id 625 LCA RS02525 WP 011374196.1	TVRLEVRRAETIKNGT....DMIGNRARIKVVKNKVAPPFK	VA	EVDIMY	GQGIS	RTGEL	VDMAVEK	DI	INKSG	SWYSYG	294	
NTDB id 600 KW2 RS01765 WP 011675413.1	SVRLDVRGSTKIEEGS.GDNKTI	CKITKIKVVKNKVAPPFK	VALVDIM	F	GEGISST	GEL	LNIAVEE	GI	TKKSGAWFAYN	312	
NTDB id 269 KZH43 RS08665 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKEITN	GKETKIKVVKNKVAPPFK	EAVVEIM	Y	GEGISKT	GEL	LKIASD	LDI	TKKAGAWYSYK	311	
NTDB id 228 SPD RS09265 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKEITN	GKETKIKVVKNKVAPPFK	EAVVEIM	Y	GEGISKT	GEL	LKIASD	LDI	TKKAGAWYSYK	311	
NTDB id 194 SPR RS08825 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKEITN	GKETKIKVVKNKVAPPFK	EAVVEIM	Y	GEGISKT	GEL	LKIASD	LDI	TKKAGAWYSYK	311	
NTDB id 159 SP RS09750 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKEITN	GKETKIKVVKNKVAPPFK	EAVVEIM	Y	GEGISKT	GEL	LKIASD	LDI	TKKAGAWYSYK	311	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	SVRLDVRGSTQIKGTG.DQKDTN	GKETKIKVVKNKVAPPFK	EAFVEIM	Y	GEGISKT	GEL	LKIASD	LDI	TKKAGAWYSYK	311	
NTDB id 499 SM12261 RS08315 WP 078228268.1	SVRLDVRGSTQIKGTG.DQKDTN	GKETKIKVVKNKVAPPFK	EAFVEIM	Y	GEGISKT	GEL	LKIASD	LDI	TKKAGAWYSYK	311	
NTDB id 453 Spy49 1753c ACI62003.1	SVRLDVRGTTQIKGTG.DQKDSST	GKETKIKVVKNKVAPPFK	VAEVEIM	Y	GEGISRT	GEL	VKIASD	LDI	TQKAGAWFSYN	311	
NTDB id 408 SMU RS09530 WP 002262392.1	SVRLDVRGNTQIKGTG.EQKDSN	GKETKIKVVKNKVAPPFK	EAFVEI	TY	GEGISRT	GEL	VKIASD	LDI	TQKAGAWFSYN	311	
NTDB id 1313 DR RS12030 WP 010888966.1	SVRLDVRKIGQ....PTKVGND	AVANTV	KIKTV	KNKVA	APPFKE	VELALV	Y	GKGF	QLSDLVGLAADMDI	TKKAGSFSYSY	307
NTDB id 1245 Cj1673c YP 002345041.1	SVRLDVRKIVAT....L.KQNEEPI	GNRVKIKVVKNKVAPPFR	QAEFDV	M	F	GEGISRE	GEL	IDYGV	KLDDIVDKSGAWFSYK	294	
NTDB id 1211 C694 RS00795 WP 000963128.1	SVRIDIRRIAS....L.KQNEQHI	GNRAKIKVVKNKVAPPFR	EAEFDI	M	F	GEGISKE	GEL	IDYGV	KLDDIVDKSGAWLSYQ	296	
NTDB id 1214 NCTC11637 00359 SQJ03206.1	SVRIDIRRIAA....L.KQNEQHI	GNRAKIKVVKNKVAPPFR	EAEFDI	M	F	GEGISKE	GEL	IDYGV	KLDDIVDKSGAWLSYQ	296	
NTDB id 1334 RA0C RS04870 WP 004918236.1	SVRIDIRRLSDTGKIKDKSGEVI	GNRTKIKVVKNKVAPPFK	SAEFDI	M	Y	GEGISV	SKVGE	ILDV	ATDLDI	TQKSGWFSYQ	307
NTDB id 1389 A4U84 RS07560 WP 021112712.1	SVRLDIRRCGV....V.KDGEI	IGSETKIKVVKNKVAPPFR	EVQFDI	M	Y	GEGISRM	NELLILA	EANG	F	TKKSGAWFSYD	310
NTDB id 1130 NGFG RS03960 WP 003688695.1	SVRLDIRRTGS....I.KKGEV	IGNETRVKVIKNKVAPPFR	QAEFDI	Y	GEGISWE	GEL	IDIG	VKN	DI	INKSGAWYSYN	294
NTDB id 1124 NGFG RS03960 WP 003688695.1	SVRLDIRRTGS....I.KKGEV	IGNETRVKVIKNKVAPPFR	QAEFDI	Y	GEGISWE	GEL	IDIG	VKN	DI	INKSGAWYSYN	294
NTDB id 1123 OK783 RS03845 WP 003688695.1	SVRLDIRRTGS....I.KKGEV	IGNETRVKVIKNKVAPPFR	QAEFDI	Y	GEGISWE	GEL	IDIG	VKN	DI	INKSGAWYSYN	294
NTDB id 1427 RS RS02760 WP 011000510.1	SVRLDIRRIGS....I.KKGEV	IGNETKIKVVKNKVAPPFR	EAFDIL	Y	GACVSR	E	GEL	IDL	GV	EAKVVEKSGAWYSYN	302
NTDB id 1165 A1552VC RS01565 WP 000344154.1	SVRLDIRRTGA....I.KEGEV	IGNETRIKVVKNKIAAPPF	EANTQIM	Y	GQGF	NRE	GEL	IDL	GV	VKHKMVEKSGAWYSYN	293
NTDB id 1142 GTF74 RS11550 WP 000344154.1	SVRLDIRRTGA....I.KEGEV	IGNETRIKVVKNKIAAPPF	EANTQIM	Y	GQGF	NRE	GEL	IDL	GV	VKHKMVEKSGAWYSYN	293
NTDB id 1022 ACIAD RS06390 WP 004925639.1	SVRLDIRRIGQ....V.KEGDEI	IGSETKIKVVKNKMAPPFR	EAFIQI	Y	GKGV	NQLGEL	VDL	AV	QQNIV	QKAGAWYSYQ	293
NTDB id 1074 ABD1 RS10195 WP 000344167.1	SVRLDIRRIGQ....V.KEGDEI	IGSETKIKVVKNKMAPPFR	EAFIQI	Y	GKGV	NQLGEL	VDL	AV	QQNIV	QKAGAWYSYQ	293
NTDB id 1205 PSJM300 05545 AFN77183.1	SVRLDIRRTGA....V.KEGDEV	IGSETRVIVVVKNKVAPPFR	QAEFQI	Y	GKGI	YRNGE	IDL	GV	QQGLV	EKSGAWFAYK	293
consensus	**!*!*!*!*!	*	*	*	*	*!*!*!*!*!*!*!*!*!*!*!	*	*	*!*!*!*!*!*!*!*!*!*!*!	*	*

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NTDB id 115 BSU 16940 NP 389576.2	EERIGQGRENAKQFLKENKDIIMLMIQEQIREHYCIDMNGVVQQQAEETQEEL.....EFEE.....	348
NTDB id 1151093 KKQ94 RS13005 WP 002287328.1	EDRIGQGRENAKIYMANHPEMMAEVSALVRAAYCIGEEVAVPEDEKQ.QEEL.....PLVEE.....	349
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQGRENAKNYLADHEDVEDEVRLKVR AAYCISDVPEEDLPTE.DEQI.....NILPDDSTEE..	355
NTDB id 600 KW2 RS01765 WP 011675413.1	DEKIGQCAEKAKNYLKEHQDVFEIDHKVRAAHCILDDSEVAETEEETTASKTAKAKKKEEKAVETEEIELELED....	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGSSENAKKYLAEHPEIFDEIDKQVRSKFCILDGEEVSEQDTEENKKDE....PKKKEEA..VNEEVPLDLGDELEIE	385
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGSSENAKKYLAEHPEIFDEIDKQVRSKFCILDGEEVSEQDTEENKKDE....PKKKEEA..VNEEVPLDLGDELEIE	385
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGSSENAKKYLAEHPEIFDEIDKQVRSKFCILDGEEVSEQDTEENKKDE....PKKKEEA..VNEEVPLDLGDELEIE	385
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGSSENAKKYLAEHPEIFDEIDKQVRSKFCILDGEEVSEQDTEENKKDE....PKKKEEA..VNEEVPLDLGDELEIE	385
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGSSENAKKYLADNPEVFAEIDHQVRVQFCILDGEEAAE....SKKDE....VAQVDS..VNEEVTLDLGDELEIE	381
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGSSENAKKYLADNPEIFDEIDHQVRVQFCILDGEEIAE....SKKDE....AAQVDS..VNEEVTLDLGDELEIE	381
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGSSENAKRYLADHPQLFDEIDRKVRVKFCILEESEESAMAVASE.....E.....TDDLALDLNGIEIE	377
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGSSENAKKFLADNPEIFDDIDHKVRVQFCILEEDNTEEKQSSKEK.....ETDEK..ADKNLVLELDDTIELE	382
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQGKEKTIAIYIAERPMEQEIRDRVMAATRAGNAGEAPALAPAPAAPEAAEA.....	363
NTDB id 1245 Cj1673c YP 002345041.1	DKKIGQGRENSKAEIKENPEIAD EITKATQNSMCI EGMI....SGSEDD..EGEE.....	343
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKIGQGRENAKALLKEDKALADEITLKI KESIC SNEEI....MPLPDE..PLEEM.....E.....	347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKIGQGRENAKALLKEDKALADEITLKI KESIC SNEEI....MPLPDE..PLEEM.....E.....	347
NTDB id 1334 RA0C RS04870 WP 004918236.1	DTKIGQGRD TVKELTKDNPEIAEELAKIREKLQAK.....	343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQGGKNNAVVKWLKENPEIADKLEQEI RNTLASNPNS....VLKATASDSNDES.....DVEEFSEEEEL...	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQKDNVRVWLKENPEISDEIDAKI RALNCVEMHI....TEGTQDETDGER.....PEE.....	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQKDNVRVWLKENPEISDEIDAKI RALNCVEMHI....TEGTQDETDGER.....PEE.....	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQKDNVRVWLKENPEISDEIDAKI RALNCVEMHI....TEGTQDETDGER.....PEE.....	348
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQGRDNCREELRENAEELAREI ENKVRHLGVTPMG....AVTLA.EEVEED.....	352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQGGKANACKYLLKENPEIAKTLDKKL REMLLNPENM....QLIAETSSAADDV.....EFGAVPEEF....	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQGGKANACKYLLKENPEIAKTLDKKL REMLLNPENM....QLIAETSSAADDV.....EFGAVPEEF....	354
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQCKNNVIRYLEENPCISTEIEAVI REQLLTKASD....QTAA.HDETEEEP.....DLL..ES.....	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQCKNNVIRYFEENNCIAEIEIERNI REQLLTTGTN....GAVQ.I.EDEEEP.....DLL..LES.....	349
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQGGKANAAKYLEENPEIGQEIEQQI RAKLLVTSAN....TKATPVAEDLADA.....DI.....	347
consensus	**!!!** ** * ** ** ** **	

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NTDB id 115 BSU 16940 NP 389576.2      ... 348
NTDB id 1151093 KKQ94 RS13005 WP 002287328.1 ... 349
NTDB id 625 LCA RS02525 WP 011374196.1  ... 355
NTDB id 600 KW2 RS01765 WP 011675413.1  ... 387
NTDB id 269 KZH43 RS08665 WP 001085462.1 IEE 388
NTDB id 228 SPD RS09265 WP 001085462.1  IEE 388
NTDB id 194 SPR RS08825 WP 001085462.1  IEE 388
NTDB id 159 SP RS09750 WP 001085462.1   IEE 388
NTDB id 527 SMSK321 RS11065 WP 001085454.1 IEE 384
NTDB id 499 SM12261 RS08315 WP 078228268.1 IEE 384
NTDB id 453 Spy49 1753c ACI62003.1      D.. 378
NTDB id 408 SMU RS09530 WP 002262392.1   D.. 383
NTDB id 1313 DR RS12030 WP 010888966.1  ... 363
NTDB id 1245 Cj1673c YP 002345041.1     ... 343
NTDB id 1211 C694 RS00795 WP 000963128.1 ... 347
NTDB id 1214 NCTC11637 00359 SQJ03206.1 ... 347
NTDB id 1334 RA0C RS04870 WP 004918236.1 ... 343
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NTDB id 1130 NGFG RS03960 WP 003688695.1 ... 348
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NTDB id 1165 A1552VC RS01565 WP 000344154.1 ... 354
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NTDB id 1022 ACIAD RS06390 WP 004925639.1 ... 349
NTDB id 1074 ABD1 RS10195 WP 000344167.1 ... 349
NTDB id 1205 PSJM300 05545 AFN77183.1   ... 347
consensus
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 non conserved  
 similar  
 ≥ 50% conserved