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NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
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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 166610 ASL15 RS06810 WP 000368166.1
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NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1

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	MAK	K	KK	EE	SKK	FE	DE	K	KAL	AA	AL	KQ	IE	FK	S	M	R	L	G	E	Q	Y	V	S	T	G	S	L	D	A	L	G	Y	P	K	R																																			
MATK	...	K	K	T	F	D	D	I	T	K	K	Y	G	A	E	R	D	K	A	L	A	D	A	L	A	L	I	E	K	D	F	G	K	S	I	M	R	L	G	E	A	.	A	N	Q	K	V	S	V	S	S	G	S	L	A	L	D	I	A	L	G	A	G	G	Y	P	K	R	74		
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.MAK	...	K	P	K	K	L	E	E	I	S	K	K	F	G	A	E	R	E	K	A	L	N	D	A	L	K	L	I	E	K	D	F	G	K	S	I	M	R	L	G	E	R	.	A	E	Q	K	V	Q	V	M	S	S	G	S	L	A	L	D	I	A	L	G	S	G	G	Y	P	K	R	73
.MAK	...	K	P	K	K	L	E	E	I	S	K	K	F	G	A	E	R	E	K	A	L	N	D	A	L	K	L	I	E	K	D	F	G	K	S	I	M	R	L	G	E	R	.	A	E	Q	K	V	Q	V	M	S	S	G	S	L	A	L	D	I	A	L	G	S	G	G	Y	P	K	R	73
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.....	MDN	D	R	Q	A	L	D	T	V	I	K	N	M	E	K	S	F	G	K	A	V	M	K	L	G	D	N	.	I	G	R	R	V	S	T	T	S	T	G	S	V	T	L	D	N	A	L	G	V	G	G	Y	P	K	R	59															
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.....	MSK																																																																						

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NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

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NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

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NTDB id 600 KW2 RS01765 WP 011675413.1	SVRLDVRGSTKIEEGS.GDNKTQIGKITKIKVVKNKVAPPFKEAVALVDIMFGEGISSTGELINIAVEEGITIKKSGAWFAYN	312
NTDB id 269 KZH43 RS08665 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETNKGKETKIKVVKNKVAPPFKEAVVEIMYGGEGISKTGELLKIASDLDIKKAGAWYSYK	311
NTDB id 228 SPD RS09265 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETNKGKETKIKVVKNKVAPPFKEAVVEIMYGGEGISKTGELLKIASDLDIKKAGAWYSYK	311
NTDB id 194 SPR RS08825 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETNKGKETKIKVVKNKVAPPFKEAVVEIMYGGEGISKTGELLKIASDLDIKKAGAWYSYK	311
NTDB id 159 SP RS09750 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETNKGKETKIKVVKNKVAPPFKEAVVEIMYGGEGISKTGELLKIASDLDIKKAGAWYSYK	311
NTDB id 499 SM12261 RS08315 WP 078228268.1	SVRLDVRGSTQIKGTG.DQKDTNKGKETKIKVVKNKVAPPFKEAFVEIMYGGEGISKTGELLKIASDLDIKKAGAWYSYK	311
NTDB id 527 SMSK321 RS11065 WP 001085454.1	SVRLDVRGSTQIKGTG.DQKDTNKGKETKIKVVKNKVAPPFKEAFVEIMYGGEGISKTGELLKIASDLDIKKAGAWYSYK	311
NTDB id 453 Spy49 1753c ACI62003.1	SVRLDVRGTTQIKGTG.DQKDSIGKETKIKVVKNKVAPPFKEAEVEIMYGGEGISRTGELVKIASDLDIQKAGAWFSYN	311
NTDB id 408 SMU RS09530 WP 002262392.1	SVRLDVRGNTQIKGTG.EQKDSNIGKETKIKVVKNKVAPPFKEAFVEIIMYGGEGISRTGELVKIASDLGIQKAGAWYSYN	311
NTDB id 625 LCA RS02525 WP 011374196.1	TVRLEVRRRAETIKNGT.....DMIGNRARIKVVKNKVAPPFKEAEVDIMYGGGISRTGELVDMAVEKDIINKSGSWYSYG	294
NTDB id 166610 ASL15 RS06810 WP 000368166.1	SVRLEVRRAEQLKQGQ.....EIVGNRTKIKVVKNKVAPPFRVAEVDIMYGGGISKEGELIDLGVENDIVDKSGAWYSYN	293
NTDB id 115 BSU 16940 NP 389576.2	SVRLEVRRAEQLKQGN.....DVMGNKTKIKVVKNKVAPPFRTAEVDIMYGGEGISKEGETIIDLGTELIDIVQKSGSWYSYE	292
NTDB id 1313 DR RS12030 WP 010888966.1	SVRLDVRKIGQ....PTKVGNDAAVANTVKIKTVKNKVAAPFKEVELALVYGGKGFQDLSDLVGLAADMDIINKAGSFYSYG	307
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NTDB id 1214 NCTC11637 00359 SQJ03206.1	SVRIDIRRIAA....L.KQNEQHIGNRAKAKVVKNKVAPPFREAEFDIMFGEGISKEGETIIDYGVKLDIVDKSGAWLSYQ	296
NTDB id 1334 RAOC RS04870 WP 004918236.1	SVRIDIRRLSDTGKIKDKSGEVIGNRTKVVVVKNKVAPPFKSAEFDIMYGGEGVSKVGEILDVATDLDIQKSGSWFSYQ	307
NTDB id 1389 A4U84 RS07560 WP 021112712.1	SVRLDIRRCGV....V.KDGDEIIGSETKVVVVKNKVAPPFREVQFDIMYGGEGISRMNELLILAEANGFIKKSGAWFSYD	310
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NTDB id 1124 NGFG RS03960 WP 003688695.1	SVRLDIRRTGS....I.KKGEVVLGNETRKKVKNKVAPPFRQAEFDILYGGEGISWEGELIDIGVKNDIINKSGAWYSYN	294
NTDB id 1123 OK783 RS03845 WP 003688695.1	SVRLDIRRTGS....I.KKGEVVLGNETRKKVKNKVAPPFRQAEFDILYGGEGISWEGELIDIGVKNDIINKSGAWYSYN	294
NTDB id 1427 RS RS02760 WP 011000510.1	SVRLDIRRIGS....I.KKGEDEVGNETKVVVVKNKVAPPFREAIFFDILYGAGVSREGEIIDLGVEAKVVEKSGAWYSYN	302
NTDB id 1165 A1552VC RS01565 WP 000344154.1	SVRLDIRRTGA....I.KEGEEVVGNETRIKVVKNKIAAPFKEANTQIMYGGGFNREGELIDLGVKHKMVEKSGAWYSYN	293
NTDB id 1142 GTF74 RS11550 WP 000344154.1	SVRLDIRRTGA....I.KEGEEVVGNETRIKVVKNKIAAPFKEANTQIMYGGGFNREGELIDLGVKHKMVEKSGAWYSYN	293
NTDB id 1022 ACIAD RS06390 WP 004925639.1	SVRLDIRRIGQ....V.KEGDEIIGSETKVVVVKNKMAPPFREAIFFQILYGGKGVNQLGELVDLAVQQNIVQKAGAWYSYQ	293
NTDB id 1074 ABD1 RS10195 WP 000344167.1	SVRLDIRRIGQ....V.KEGDEIIGSETKVVVVKNKMAPPFKEAIFQILYGGKGTNQLGELVDLAVQQDIVQKAGAWYSYQ	293
NTDB id 1205 PSJM300 05545 AFN77183.1	SVRLDIRRTGA....V.KEGDEVVGSETRVVVVKNKVAPPFRQAEFQILYGGKGIYRNGEIIDLGVQQGLVEKSGAWAYK	293
consensus	*!!***!* * ** *****!*****!!*!!*!!* * *****!*!*** ***** ** *** ! !*****!	

logo

NTDB id 600 KW2 RS01765 WP 011675413.1	DEKIGQGA	EKAKNYLKEHQDV	DEIDHKVRAAHG	LDDSEVAETEEETT	ASKTKAKAKKEEK	AVETEEIELELED	....	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	..VNEEVPLDLG	DELEIE	385
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	..VNEEVPLDLG	DELEIE	385
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	..VNEEVPLDLG	DELEIE	385
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	..VNEEVPLDLG	DELEIE	385
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLAADNPEIF	DEIDHQVRVQFGL	IDGEEIAES....	KKDE....AAQVDS	..VNEEVTLDLG	DELEIE	381
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLAADNPEV	FAEIDHQVRVQFGL	IDGEEAAES....	KKDE....VAQVDS	..VNEEVTLDLG	DELEIE	381
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEEEESAMAV	ASE.....E.....	TDDLALDLDN	GIEIE	377
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEEDNTEEKQSS	KEK.....ETDEK	..ADKNLVLEL	DDTIELE	382
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQG	RENAKNYLADHED	VEDEVRLKVRAAY	GISDVPEEDLPTT	EDEQINILPDD	STEE.....		355
NTDB id 166610 ASL15 RS06810 WP 000368166.1	GERMGQG	KENVKMYLKENP	QIKEEIDRKLREK	LGISDGDVEETED	A...PKSLFDEE	.....		347
NTDB id 115 BSU 16940 NP 389576.2	EERLGQG	RENAKQFLKENK	DIMLMIQEQIRE	HYGLDNNGVVQQ	AAETQEELEFEE	.....		348
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQG	KEKTIAYIAER	PEMEQEIRDRVMA	AIRAGNAGEAPAL	APAPAAPEAAEA	.....		363
NTDB id 1245 Cj1673c YP 002345041.1	DKKLGQG	RENSKAFLENPE	IADEITKAIQNSM	GIEGMI....SG	SEDD..EGEE	.....		343
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKLGQG	RENAKALLKED	KALADEITLKIK	ESIGSNEEI....	MPLPDE..PLE	EME.....		347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKLGQG	RENAKALLKED	KALADEITLKIK	ESIGSNEEI....	MPLPDE..PLE	EME.....		347
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKLGQG	RDTVKELIKDN	PELAEELEAKIR	EKLQAK.....				343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQG	KNNAVKWLKEN	PEIADKLEQEIR	NTLASNPN....	VLKATASDSN	DESD..VEEFSE	EEL.....	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKEN	PEISDEIDAKIR	ALNGVEMHI....	TEGTQDETD	GER.....PEE	.....	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKEN	PEISDEIDAKIR	ALNGVEMHI....	TEGTQDETD	GER.....PEE	.....	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQG	KDNVRVWLKEN	PEISDEIDAKIR	ALNGVEMHI....	TEGTQDETD	GER.....PEE	.....	348
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQG	RDNCREFLRENA	EELAREIENKVRE	HLGVTMPG....	AVTLA.EEVEED	.....		352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQG	KANACKYLLKEN	PEIAKTLDDKKL	REMLLNPENM....	QLIAETSSA	ADDVE..FGAV	PEEF.....	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQG	KANACKYLLKEN	PEIAKTLDDKKL	REMLLNPENM....	QLIAETSSA	ADDVE..FGAV	PEEF.....	354
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQG	KNNVIRYFEEN	NQIAEEIERNIR	EQLLTTGTN....	GAVQ.I.EDEE	EPD..LL..ES	.....	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQG	KNNVIRYFEEN	NQIAEEIERNIR	EQLLTTGTN....	GAVQ.I.EDEE	EPD..LL..ES	.....	349
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQG	KANAACKYLL	ENPEIGQIEEQ	IRAKLLVTSAN	TKATPVA	EDLADAD..I		347
consensus	***!!!	*****	**	*****	*****	**	**	

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		IEE	
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 499 SM12261 RS08315 WP 078228268.1	IEE		384
NTDB id 527 SMSK321 RS11065 WP 001085454.1	IEE		384
NTDB id 453 Spy49 1753c ACI62003.1	D..		378
NTDB id 408 SMU RS09530 WP 002262392.1	D..		383
NTDB id 625 LCA RS02525 WP 011374196.1	...		355
NTDB id 166610 ASL15 RS06810 WP 000368166.1	...		347
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NTDB id 1074 ABD1 RS10195 WP 000344167.1	...		349
NTDB id 1205 PSJM300 05545 AFN77183.1	...		347
consensus			

-  non conserved
-  similar
-  ≥ 50% conserved