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NTDB	id	601	KW2	RS02615	WP	021036805.1	QDFNGAASNQ....TPPTQTGCRGP.....RGPQNPRAKQPKGLEEFGINITESARRGEIDPVIGRDEEIKRV	136
NTDB	id	281	KZH43	RS03550	WP	000882517.1	RPSS..NTPP....IPPTQSGGGYGGNGGYGSQNRGSAQTTPPSQEKGLEEFGINVTEIARRGIDPVIGRDEEIRV	142
NTDB	id	245	SPD	RS03860	WP	000882517.1	RPSS..NTPP....IPPTQSGGGYGGNGGYGSQNRGSAQTTPPSQEKGLEEFGINVTEIARRGIDPVIGRDEEIRV	142
NTDB	id	243	SPR	RS03635	WP	000882517.1	RPSS..NTPP....IPPTQSGGGYGGNGGYGSQNRGSAQTTPPSQEKGLEEFGINVTEIARRGIDPVIGRDEEIRV	142
NTDB	id	241	SP	RS04015	WP	000882523.1	RPSS..NTPP....IPPTQSGGGYGGNGGYGSQNRGSAQTTPPSQEKGLEEFGINVTEIARRGIDPVIGRDEEIRV	142
NTDB	id	136361	GBS85147	RS02725	WP	017647074.1	RAFNGQDLPN....TPPTQSGGNRGGGNGNGRNNNRN.QTATPPQAKGILEEFGINVTEIARHGDIDPVIGRDEEIRV	146
NTDB	id	378	SMU	RS02690	WP	002263569.1	RAFNNQDLPN....TPPTQAGGGNGNGGNRRPG.GP.QQQASQKPNGLEEFGINLTDIARKGEIDPVIGRDEEITRV	143
NTDB	id	85	BSU	00860	NP	387967.1	LGSNET.....GSSAAGTNSNANTPTLDSLARDLTAIAKEDSLDPVIGRSKEIQRV	192
NTDB	id	610	V4T04	RS10165	WP	012897346.1	TGLKVPESKKAIVTPMSKRKMAKQ.....VAENSTTPTLDSVSSDLTEEARLGLKLPDMIGREAEIDRL	205
NTDB	id	290	KZH43	RS10025	WP	001109677.1	AGWTREDLKA.LRQRHRTV.ADKQ.....NSMANMMGMPTPSGGLEDYTHDLTEQARSGKLEPVIGRDKEISRM	218
NTDB	id	289	SPD	RS10700	WP	001109677.1	AGWTREDLKA.LRQRHRTV.ADKQ.....NSMANMMGMPTPSGGLEDYTHDLTEQARSGKLEPVIGRDKEISRM	218
NTDB	id	287	SP	RS11210	WP	001109712.1	AGWTREDLKA.LRQRHRTV.ADKQ.....NSMANMMGMPTPSGGLEDYTHDLTEQARSGKLEPVIGRDKEISRM	218
NTDB	id	377	SMU	RS09275	WP	002262344.1	AGFSKEDIKA.IFEMRKPKKVKNS.....SSFSDLMKPP.SVTGELADFTRDLTELARQGRLEPVIGREQEISRM	222
NTDB	id	297	STER	RS00545	WP	011680614.1	AGLSKQDLKA.IHDLRKPKKSKAS.....ANFANMMQPPQSSTGELADYTKDLTALAESGNLDPVIGRDEEISRM	225
NTDB	id	329	STU	RS10020	WP	011225298.1	AGLSKQDLKA.IHDLRKPKKSKAS.....ANFANMMQPPQSSTGELADYTKDLTALAESGNLDPVIGRDEEISRM	225
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NTDB	id	601	KW2	RS02615	WP	021036805.1	DVILFIDEIHEIVGAGSAGDGNMDAGNILKPALARGEQLQVGATTLNEYR.IIEKDAALERMMQPVKVDEPSVDETITIL	295
NTDB	id	281	KZH43	RS03550	WP	000882517.1	DIILFIDEIHEIVGAGSASDGNMDAGNILKPALARGEQLQVGATTLNEYR.IIEKDAALERMMQPVKVDEPTVDDETITIL	301
NTDB	id	245	SPD	RS03860	WP	000882517.1	DIILFIDEIHEIVGAGSASDGNMDAGNILKPALARGEQLQVGATTLNEYR.IIEKDAALERMMQPVKVDEPTVDDETITIL	301
NTDB	id	243	SPR	RS03635	WP	000882517.1	DIILFIDEIHEIVGAGSAGDGNMDAGNILKPALARGEQLQVGATTLNEYR.IIEKDAALERMMQPVKVDEPTVDDETITIL	301
NTDB	id	241	SP	RS04015	WP	000882523.1	DIILFIDEIHEIVGAGSASDGNMDAGNILKPALARGEQLQVGATTLNEYR.IIEKDAALERMMQPVKVDEPTVDDETITIL	301
NTDB	id	136361	GBS85147	RS02725	WP	017647074.1	DVILFIDEIHEIVGAGTAGEGSDAGNILKPALARGEQLQVGATTLNEYR.IIEKDAALERMMQPVKVDEPSVEETITIL	305
NTDB	id	378	SMU	RS02690	WP	002263569.1	DVILFIDEIHEIVGAGSAGDGNMDAGNILKPALARGEQLQVGATTLNEYR.IIEKDAALERMMQPVKVDEPSVAETITIL	302
NTDB	id	85	BSU	O0860	NP	387967.1	NIIILFIDELHTLIIGAGG.AEGATDASNILKPSLARGEQLQCIGATTLD EYRKY IEKDAALERRFPPIQVDQPSVDESIIQIL	351
NTDB	id	610	V4T04	RS10165	WP	012897346.1	DVIILFIDEIHTTIIGAGGMDSVNDAANILKPALARGDFQMVGATTYHEYQKYIEKDEALERRLRINVDEPSPDEAIIA IL	365
NTDB	id	290	KZH43	RS10025	WP	001109677.1	QVILFIDELHTIMSGSGCIDSTLDAANILKPALARGTLRTVGATTQEYQKHIEKDAALSRRFAKVTTIEPSVADSM TIL	378
NTDB	id	289	SPD	RS10700	WP	001109677.1	QVILFIDELHTIMSGSGCIDSTLDAANILKPALARGTLRTVGATTQEYQKHIEKDAALSRRFAKVTTIEPSVADSM TIL	378
NTDB	id	287	SP	RS11210	WP	001109712.1	QVILFIDELHTIMSGSGCIDSTLDAANILKPALARGTLRTVGATTQEYQKHIEKDAALSRRFAKVTTIEPSVADSM TIL	378
NTDB	id	377	SMU	RS09275	WP	002262344.1	HIVLFIDELHTIMSGSGCIDSTLDAANILKPALARGLSLRTIGATTQEYQKHIEKDAALSRRFAKVTTIEPSEEEAYQ I L	382
NTDB	id	297	STER	RS00545	WP	011680614.1	KIILFIDELHTIIGSGSGCIDSTLDAANILKPALARGTLHVMGATTQA EYQKH IEKDAALSRRFAKITIEEPSVSEAIT DIL	385
NTDB	id	329	STU	RS10020	WP	011225298.1	KIILFIDELHTIIGSGSGCIDSTLDAANILKPALARGTLHVMGATTQA EYQKH IEKDAALSRRFAKITIEEPSVSEAIT DIL	385
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NTDB	id	601	KW2	RS02615	WP	021036805.1	R	G	I	Q	A	R	Y	E	D	Y	H	H	V	K	Y	T	D	E	A	E	A	A	A	H	L	S	N	R	Y	I	Q	D	R	F	L	P	D	K	A	I	D	L	L	E	A	G	S	K	M	N	L	T	L	K	F	.	.	V	D	P	E	D	I	N	R	R	I	A	D	A	E	N	K	K	N	E	A	T	373																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
NTDB	id	281	KZH43	RS03550	WP	000882517.1	K	G	I	Q	K	K	Y	E	D	Y	H	H	V	Q	Y	T	D	A	A	E	I	E	A	A	A	T	L	S	N	R	Y	I	Q	D	R	F	L	P	D	K	A	I	D	L	L	E	A	G	S	K	M	N	L	T	L	N	F	.	.	V	D	P	K	V	I	D	Q	R	L	I	E	A	E	N	L	K	S	Q	A	T	379																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
NTDB	id	245	SPD	RS03860	WP	000882517.1	K	G	I	Q	K	K	Y	E	D	Y	H	H	V	Q	Y	T	D	A	A	E	I	E	A	A	A	T	L	S	N	R	Y	I	Q	D	R	F	L	P	D	K	A	I	D	L	L	E	A	G	S	K	M	N	L	T	L	N	F	.	.	V	D	P	K	V	I	D	Q	R	L	I	E	A	E	N	L	K	S	Q	A	T	379																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
NTDB	id	243	SPR	RS03635	WP	000882517.1	K	G	I	Q	K	K	Y	E	D	Y	H	H	V	Q	Y	T	D	A	A	E	I	E	A	A	A	T	L	S	N	R	Y	I	Q	D	R	F	L	P	D	K	A	I	D	L	L	E	A	G	S	K	M	N	L	T	L	N	F	.	.	V	D	P	K	V	I	D	Q	R	L	I	E	A	E	N	L	K	S	Q	A	T	379																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
NTDB	id	241	SP	RS04015	WP	000882523.1	K	G	I	Q	K	K	Y	E	D	Y	H	H	V	Q	Y	T	D	A	A	E	I	E	A	A	A	T	L	S	N	R	Y	I	Q	D	R	F	L	P	D	K	A	I	D	L	L	E	A	G	S	K	M	N	L	T	L	N	F	.	.	V	D	P	K	V	I	D	Q	R	L	I	E	A	E	N	L	K	S	Q	A	T	379																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
NTDB	id	136361	GBS85147	RS02725	WP	017647074.1	K	G	I	Q	K	K	Y	E	D	Y	H	H	V	K	Y	N	D	T	D	A	E	A	A	A	V	L	S	N	R	Y	I	Q	D	R	F	L	P	D	K	A	I	D	L	L	E	A	G	S	K	M	N	L	T	L	N	F	.	.	V	D	P	K	E	M	D	Q	R	L	I	E	A	E	N	L	K	A	Q	A	T	383																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
NTDB	id	378	SMU	RS02690	WP	002263569.1	K	G	I	Q	P	K	Y	E	D	Y	H	H	V	K	Y	T	D	E	A	E	I	E	A	A	N	L	S	N	R	Y	I	Q	D	R	F	L	P	D	K	A	I	D	L	L	E	A	G	S	K	M	N	L	T	L	N	F	.	.	V	D	P	K	E	I	D	H	R	L	I	E	A	E	N	L	K	A	Q	A	T	380																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
NTDB	id	85	BSU	O0860	NP	387967.1	Q	G	L	R	D	R	Y	E	A	H	R	V	S	I	T	D	D	A	E	I	E	A	A	V	L	S	D	R	Y	I	S	D	R	F	L	P	D	K	A	I	D	L	E	A	G	S	K	V	R	L	R	S	F	T	T	P	P	N	L	K	E	L	E	Q	L	D	E	V	R	K	E	K	D	A	A	V	431																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
NTDB	id	610	V4T04	RS10165	WP	012897346.1	Q	G	L	R	E	K	F	E	D	Y	H	Q	V	K	F	T	D	Q	A	I	K	S	A	V	M	L	S	V	R	Y	M	T	S	R	K	L	P	D	K	A	I	D	L	L	E	A	A	A	V	K	I	S	V	K	N	Q	T	K	R	L	D	E	K	E	L	A	E	A	Q	E	E	L	S	E	A	V	445																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
NTDB	id	290	KZH43	RS10025	WP	001109677.1	Q	G	L	K	A	T	Y	E	K	H	R	V	Q	I	T	D	E	A	V	E	T	A	V	K	M	A	H	R	Y	L	T	S	R	H	L	P	D	S	A	I	D	L	L	E	A	A	T	V	Q	N	K	A	K	H	V	K	A	D	S	D	L	.	.	.	.	.	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

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NTDB	id	601	KW2	RS02615	WP	021036805.1	KAEDFEKAAHFRDQISKLRRLQK.....QEVTDEDMPVITEKDTEQIVEQKTQIPVGDLKEKEQTQLINLADDLKAHVI	447
NTDB	id	281	KZH43	RS03550	WP	000882517.1	REEDFEKAAAYFRDQIAKYKEMQK.....KKITTDQDTPPIISEKTIHEHIIEQKTNIPVGD LKEKEQSQLIHLAEDLKSHVI	453
NTDB	id	245	SPD	RS03860	WP	000882517.1	REEDFEKAAAYFRDQIAKYKEMQK.....KKITTDQDTPPIISEKTIHEHIIEQKTNIPVGD LKEKEQSQLIHLAEDLKSHVI	453
NTDB	id	243	SPR	RS03635	WP	000882517.1	REEDFEKAAAYFRDQIAKYKEMQK.....KKITTDQDTPPIISEKTIHEHIIEQKTNIPVGD LKEKEQSQLIHLAEDLKSHVI	453
NTDB	id	241	SP	RS04015	WP	000882523.1	REEDFEKAAAYFRDQIAKYKEMQK.....KKITTDQDTPSISEKTIHEHIIEQKTNIPVGD LKEKEQSQLIHLAEDLKSHVI	453
NTDB	id	136361	GBS85147	RS02725	WP	017647074.1	REEDYERAAAYFRDQIAKYKEMQQ.....KQVDDQDTPPIITEKTIHEHIIEEKNIPVGD LKEKEQSQLINLADDLKQHVI	457
NTDB	id	378	SMU	RS02690	WP	002263569.1	RDEYFEKAAAYFRDQIAKYKEMQS.....AKLDKENTPVITEKNIIEVIVEQKTNIPVGELKEKEQSQLIHLADDLKTRVI	454
NTDB	id	85	BSU	O0860	NP	387967.1	QSQEFEKAAASLRDTEQRLLREQVEDTKKSWKEKGQGENSEVTVDDIAMVVSSWTGVPVSKTAQTETDKLINVENILHSRVI	511
NTDB	id	610	V4T04	RS10165	WP	012897346.1	IKLDIKASRTKEKAVEKIADKIYKFS.....VKEDKRQEVTDAQVAIVASTLTGVPTITQMTKSESDDLINLEKELHKRVV	520
NTDB	id	290	KZH43	RS10025	WP	001109677.1	MDGKWQAQAQLIAKEE.....E.....VPV.YKDLVTESDILTTL SRLSGIPVQKLTQTDAKKYNLEAE LHKRVI	515
NTDB	id	289	SPD	RS10700	WP	001109677.1	MDGKWQAQAQLIAKEE.....E.....VPV.YKDLVTESDILTTL SRLSGIPVQKLTQTDAKKYNLEAE LHKRVI	515
NTDB	id	287	SP	RS11210	WP	001109712.1	MDGKWQAQAQLIAKEE.....E.....VPV.YKDLVTESDILTTL SRLSGIPVQKLTQTDAKKYNLEAE LHKRVI	515
NTDB	id	377	SMU	RS09275	WP	002262344.1	ITNDYQLAKRL LKKEK.....K.....PLLKKRAEVKEEDILATLSKL SGIPVKKLTQADSKKYNLEREL HKRVI	518
NTDB	id	297	STER	RS00545	WP	011680614.1	ISGDIGA AVKQYKANQ.....K.....AKFPKPALVDADQIMQTL SRLSGIPVEKM TQTDSKRYLNLESEL HKRVI	521
NTDB	id	329	STU	RS10020	WP	011225298.1	ISGDIGA AVKQYKANQ.....K.....AKFPKPALVDADQIMQTL SRLSGIPVEKM TQTDSKRYLNLESEL HKRVI	521
consensus							* * * * *	* ! * *

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NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
NTDB id 243 SPR RS03635 WP 000882517.1
NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 136361 GBS85147 RS02725 WP 017647074.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 85 BSU 00860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
NTDB id 287 SP RS11210 WP 001109712.1
NTDB id 377 SMU RS09275 WP 002262344.1
NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus

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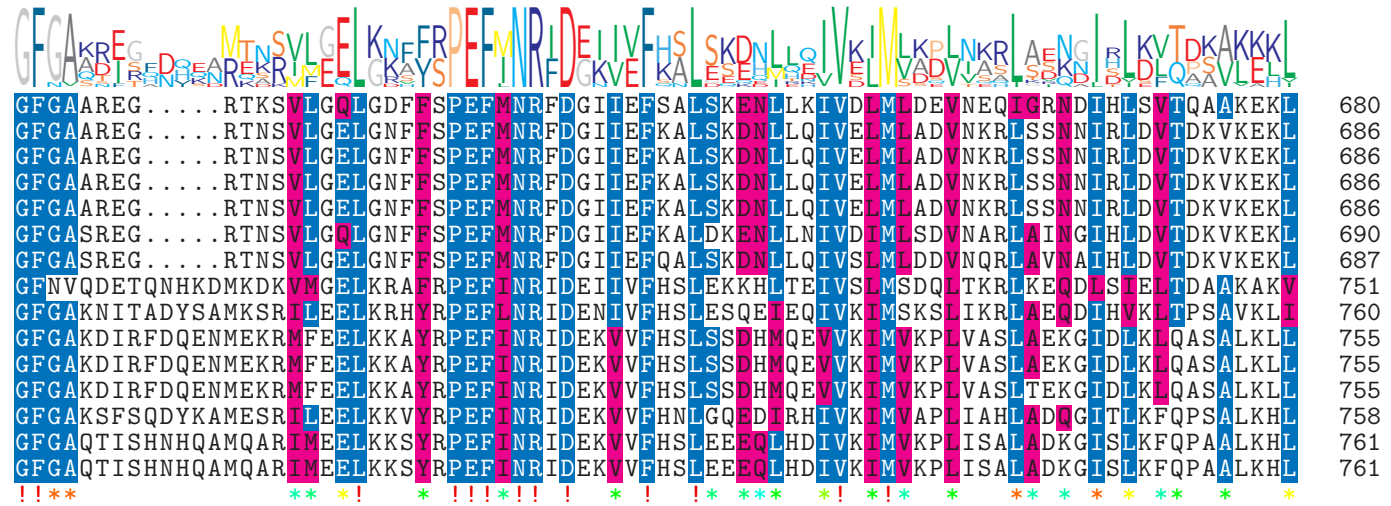


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NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
NTDB id 243 SPR RS03635 WP 000882517.1
NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 136361 GBS85147 RS02725 WP 017647074.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 85 BSU 00860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
NTDB id 287 SP RS11210 WP 001109712.1
NTDB id 377 SMU RS09275 WP 002262344.1
NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus

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non conserved
 similar
 ≥ 50% conserved