

logo



NTDB id 600 KW2 RS01765 WP 011675413.1	MATKKKT....NFDDITKKYGA	ERDKALADALALIEKD	FGKGSIMRLGEA	.ANQKVS	VSSGSLALDI	I	ALGAGGYPKGR	74
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAKKPK....KLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	I	ALGSGGYPKGR	73	
NTDB id 228 SPD RS09265 WP 001085462.1	.MAKKPK....KLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	I	ALGSGGYPKGR	73	
NTDB id 194 SPR RS08825 WP 001085462.1	.MAKKPK....KLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	I	ALGSGGYPKGR	73	
NTDB id 159 SP RS09750 WP 001085462.1	.MAKKPK....KLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	I	ALGSGGYPKGR	73	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAKKPK....KLDEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	I	ALGSGGYPKGR	73	
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAKKPK....KLDEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	I	ALGSGGYPKGR	73	
NTDB id 408 SMU RS09530 WP 002262392.1	.MAKRIK....KTEEITKKFGD	ERRKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQVMSSGSLALDI	I	ALGAGGYPKGR	73	
NTDB id 453 Spy49 1753c ACI62003.1	.MAKKLK....KNEEITKKFGD	ERRKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQVMSSGSLALDI	I	ALGAGGYPKGR	73	
NTDB id 115 BSU 16940 NP 389576.2	.....MS	DRQAALDMALKQIEKQ	FGKGSIMKLGK	.TDTRISTVPSGSLALDI	I	TALGIGGYPRGR	58	
NTDB id 625 LCA RS02525 WP 011374196.1	.....MAKD	ERQAALDAALKKIEKN	FGKGSIMRMGEK	.VDTQVSTVSSGSLALDE	I	ALGVGGYPRGR	60	
NTDB id 1313 DR RS12030 WP 010888966.1	.....MSKDATKEISAPTD	AKERSKATETAM	QIEKAFGKGSIMKLGAE	.SKLDVQVVSTGSLSLDL	I	ALGVGGIPRGR	72	
NTDB id 1245 Cj1673c YP 002345041.1	.....MDDN	KRKSALDAALKS	LDKTFGKGTILRLGDK	.EVEQIDSIGTGSVGLDL	I	ALGIGGVPKGR	59	
NTDB id 1214 NCTC11637 00359 SQJ03206.1	.....M..AIDE	DKQKATISLAIKQID	KVFGKGAIVRLGDK	.QVEKIDAI	I	STGSLGLDLALGIGGVPKGR	61	
NTDB id 1211 C694 RS00795 WP 000963128.1	.....M..AIDE	DKQKATISLAIKQID	KVFGKGAIVRLGDK	.QVEKIDAI	I	STGSLGLDLALGIGGVPKGR	61	
NTDB id 1334 RAOC RS04870 WP 004918236.1	.....MAKTETT..SPND	DKKALAAVLEKLDKT	YKGTVMKLG	GTVDHNI	I	EVIPSGSLGLDLALGVGGYPKGR	68	
NTDB id 67518 GJW30 RS11385 WP 096355372.1	.....MGQAALRVVE..GNSM	DKSKALDAALSQIER	AFGKGSIMRLGKS	.DKVETEVI	I	SSGSLGLDI	ALGIGGLPRGR	70
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKSSKNNTVVVKQ..VEPEQ	KKQALEAALQIEKQ	FGKGSIMKLGQT	.EQLD	I	TESVSTGSLGLDLALGIGGLPMGR	76	
NTDB id 1130 NGFG RS03960 WP 003688695.1	.....MSD	DKSKALAAALQIEKS	FGKGAIMKMDGSQ	QEE	I	ENLEVI	STGSLGLDLALGVGGLPRGR	60
NTDB id 1124 NGFG RS03960 WP 003688695.1	.....MSD	DKSKALAAALQIEKS	FGKGAIMKMDGSQ	QEE	I	ENLEVI	STGSLGLDLALGVGGLPRGR	60
NTDB id 1123 OK783 RS03845 WP 003688695.1	.....MSD	DKSKALAAALQIEKS	FGKGAIMKMDGSQ	QEE	I	ENLEVI	STGSLGLDLALGVGGLPRGR	60
NTDB id 1427 RS RS02760 WP 011000510.1	.MEDG.....KKA	.SMSAEKQKALAAALQIEKQ	FGKGSIMKMGDA	.EVEPVQVVSTGSLGLD	I	VALGVGGLPRGR	68	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	.....MDEN	KQKALAAALGQIEKQ	FGKGSIMRLGDN	.RAMDVET	I	STGSLSLDI	ALGAGGLPMGR	59
NTDB id 1142 GTF74 RS11550 WP 000344154.1	.....MDEN	KQKALAAALGQIEKQ	FGKGSIMRLGDN	.RAMDVET	I	STGSLSLDI	ALGAGGLPMGR	59
NTDB id 1205 PSJM300 05545 AFN77183.1	.....MDEN	KKRALAAALGQIEKQ	FGKGAVMRMGDH	.DRQAI	I	PSISTGSLGLDI	ALGIGGLPKGR	59
NTDB id 1022 ACIAD RS06390 WP 004925639.1	.....MDDN	KSALQAALSQIEKQ	FGKNTVMRLGDN	.TVQAVEAVSTGSLT	I	LDI	ALGIGGLPKGR	59
NTDB id 1074 ABD1 RS10195 WP 000344167.1	.....MDEN	KSALQAALSQIEKQ	FGKNTVMRLGDN	.TVQAVEAVSTGSLT	I	LDI	ALGIGGLPKGR	59
consensus		** **	**	****	*!!*****	*	***!!*!!*!!*!!*!!*!!*!!*!!	





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NTDB id 600	KW2	RS01765	WP	011675413.1	SVRLDVRG	STKIEEGS	.GDNKTQ	IGK	ITK	IKVV	KNKV	APPF	KVAL	VDIM	F	GEGIS	STGEL	INTA	VEEG	IT	KK	S	GAW	F	AYN	312																																																							
NTDB id 269	KZH43	RS08665	WP	001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGK	ETK	IKVV	KNKV	APPF	KEAV	VEIM	Y	GEGIS	KTGEL	LKIAS	DLDI	TK	K	A	GAW	YSYK	311																																																								
NTDB id 228	SPD	RS09265	WP	001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGK	ETK	IKVV	KNKV	APPF	KEAV	VEIM	Y	GEGIS	KTGEL	LKIAS	DLDI	TK	K	A	GAW	YSYK	311																																																								
NTDB id 194	SPR	RS08825	WP	001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGK	ETK	IKVV	KNKV	APPF	KEAV	VEIM	Y	GEGIS	KTGEL	LKIAS	DLDI	TK	K	A	GAW	YSYK	311																																																								
NTDB id 159	SP	RS09750	WP	001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGK	ETK	IKVV	KNKV	APPF	KEAV	VEIM	Y	GEGIS	KTGEL	LKIAS	DLDI	TK	K	A	GAW	YSYK	311																																																								
NTDB id 527	SMSK321	RS11065	WP	001085454.1	SVRLDVRG	STQIKGTG	.DQKDTN	VGK	ETK	IKVV	KNKV	APPF	KEAF	VEIM	Y	GEGIS	KTGEL	LKIAS	DLDI	TK	K	A	GAW	YSYK	311																																																								
NTDB id 499	SM12261	RS08315	WP	078228268.1	SVRLDVRG	STQIKGTG	.DQKDTN	VGK	ETK	IKVV	KNKV	APPF	KEAF	VEIM	Y	GEGIS	KTGEL	LKIAS	DLDI	TK	K	A	GAW	YSYK	311																																																								
NTDB id 408	SMU	RS09530	WP	002262392.1	SVRLDVRG	NTQIKGTG	.EQKDSN	IGK	ETK	IKVV	KNKV	APPF	KEAF	VEIM	Y	GEGIS	R	TGEL	VKIAS	DLGI	T	K	A	GAW	YSYK	311																																																							
NTDB id 453	Spy49	1753c	ACI62003.1		SVRLDVRG	TTQIKGTG	.DQK	DSS	IGK	ETK	IKVV	KNKV	APPF	KVAE	VEIM	Y	GEGIS	R	TGEL	VKIAS	DLDI	T	K	A	GAW	F	SYN	311																																																					
NTDB id 115	BSU	16940	NP	389576.2	SVRLEVR	RAEQLKQGN	....DV	MGN	TKK	IKVV	KNKV	APPF	R	TAE	VDIM	Y	GEGIS	K	E	G	E	I	D	L	G	T	E	L	D	I	V	Q	K	S	G	S	W	S	Y	E	292																																								
NTDB id 625	LCA	RS02525	WP	011374196.1	TVRLEVR	RAETIKNGT	....DM	I	GNR	A	R	I	K	V	V	K	N	K	V	A	P	P	F	K	V	A	E	V	D	I	M	Y	G	G	I	S	R	T	G	E	L	V	D	M	A	V	E	K	D	I	N	K	S	G	S	W	S	Y	G	294																					
NTDB id 1313	DR	RS12030	WP	010888966.1	SVRLDVR	KIG....	QPTK	VGNDA	V	A	N	T	V	K	N	K	V	A	A	P	F	K	E	V	E	L	A	L	V	Y	G	K	G	F	D	Q	L	S	D	L	V	G	L	A	A	D	M	D	I	T	K	K	A	G	S	F	Y	S	G	307																					
NTDB id 1245	Cj1673c	YP	002345041.1		SVRLDVR	KVA....	TL	KQN	E	E	P	I	G	N	R	V	K	V	V	K	N	K	V	A	P	P	F	R	Q	A	E	F	D	V	M	F	G	E	L	S	R	E	G	E	L	I	D	Y	G	V	K	L	D	I	V	D	K	S	G	A	W	F	S	Y	K	294															
NTDB id 1214	NCTC11637	00359	SQJ03206.1		SVR	I	D	I	R	R	I	A	....	AL	KQN	E	Q	H	I	G	N	R	A	K	A	K	V	V	K	N	K	V	A	P	P	F	R	E	A	E	F	D	I	M	F	G	E	G	I	S	K	E	G	E	I	D	Y	G	V	K	L	D	I	V	D	K	S	G	A	W	L	S	Y	Q	296						
NTDB id 1211	C694	RS00795	WP	000963128.1	SVR	I	D	I	R	R	I	A	....	SL	KQN	E	Q	H	I	G	N	R	A	K	A	K	V	V	K	N	K	V	A	P	P	F	R	E	A	E	F	D	I	M	F	G	E	G	I	S	K	E	G	E	I	D	Y	G	V	K	L	D	I	V	D	K	S	G	A	W	L	S	Y	Q	296						
NTDB id 1334	RAOC	RS04870	WP	004918236.1	SVR	I	D	I	R	R	S	L	S	D	T	G	K	I	K	D	K	S	G	E	V	I	G	N	R	T	K	V	V	K	N	K	V	A	P	P	F	K	S	A	E	F	D	I	M	Y	G	E	G	V	S	K	V	G	E	I	L	D	V	A	T	D	L	D	I	I	Q	K	S	G	S	W	F	S	Y	Q	307
NTDB id 67518	GJW30	RS11385	WP	096355372.1	S	I	R	L	D	I	R	R	I	G	....	AI	KER	E	E	V	G	N	Q	T	R	V	K	V	V	K	N	K	L	A	P	P	F	K	Q	V	E	F	D	I	M	Y	G	E	G	V	S	K	M	G	E	I	L	D	L	G	V	K	A	G	V	V	E	K	S	G	A	W	F	S	Y	D	304				
NTDB id 1389	A4U84	RS07560	WP	021112712.1	SVRLD	I	R	R	C	G	....	VV	KDG	DEI	I	G	S	E	T	K	V	V	K	N	K	V	A	P	P	F	R	E	V	Q	F	D	I	M	Y	G	E	G	I	S	R	M	N	E	L	I	L	A	E	A	N	G	F	I	K	K	S	G	A	W	F	S	Y	D	310												
NTDB id 1130	NGFG	RS03960	WP	003688695.1	SVRLD	I	R	R	T	G	....	SI	KKG	E	E	V	L	G	N	E	T	R	V	K	V	I	K	N	K	V	A	P	P	F	R	Q	A	E	F	D	I	L	Y	G	E	G	I	S	W	E	G	E	L	I	D	I	G	V	K	N	D	I	I	N	K	S	G	A	W	S	Y	N	294								
NTDB id 1124	NGFG	RS03960	WP	003688695.1	SVRLD	I	R	R	T	G	....	SI	KKG	E	E	V	L	G	N	E	T	R	V	K	V	I	K	N	K	V	A	P	P	F	R	Q	A	E	F	D	I	L	Y	G	E	G	I	S	W	E	G	E	L	I	D	I	G	V	K	N	D	I	I	N	K	S	G	A	W	S	Y	N	294								
NTDB id 1123	OK783	RS03845	WP	003688695.1	SVRLD	I	R	R	T	G	....	SI	KKG	E	E	V	L	G	N	E	T	R	V	K	V	I	K	N	K	V	A	P	P	F	R	Q	A	E	F	D	I	L	Y	G	E	G	I	S	W	E	G	E	L	I	D	I	G	V	K	N	D	I	I	N	K	S	G	A	W	S	Y	N	294								
NTDB id 1427	RS	RS02760	WP	011000510.1	SVRLD	I	R	R	I	G	....	SI	KKG	D	E	V	V	G	N	E	T	K	V	V	K	N	K	V	A	P	P	F	R	E	A	I	F	D	I	L	Y	G	A	G	V	S	R	E	G	E	I	D	L	G	V	E	A	K	V	V	E	K	S	G	A	W	S	Y	N	302											
NTDB id 1165	A1552VC	RS01565	WP	000344154.1	SVRLD	I	R	R	T	G	....	AI	KEG	E	E	V	V	G	N	E	T	R	I	K	V	V	K	N	K	I	A	A	P	F	K	E	A	N	T	Q	I	M	Y	G	Q	G	F	N	R	E	G	E	L	I	D	L	G	V	K	H	K	M	V	E	K	S	G	A	W	S	Y	N	293								
NTDB id 1142	GTF74	RS11550	WP	000344154.1	SVRLD	I	R	R	T	G	....	AI	KEG	E	E	V	V	G	N	E	T	R	I	K	V	V	K	N	K	I	A	A	P	F	K	E	A	N	T	Q	I	M	Y	G	Q	G	F	N	R	E	G	E	L	I	D	L	G	V	K	H	K	M	V	E	K	S	G	A	W	S	Y	N	293								
NTDB id 1205	PSJM300	05545	AFN77183.1		SVRLD	I	R	R	T	G	....	AV	KEG	D	E	V	V	G	S	E	T	R	V	K	V	V	K	N	K	V	A	P	P	F	R	Q	A	E	F	Q	I	L	Y	G	K	G	I	Y	R	N	G	E	I	D	L	G	V	Q	Q	L	V	E	K	S	G	A	W	Y	A	Y	K	293									
NTDB id 1022	ACIAD	RS06390	WP	004925639.1	SVRLD	I	R	R	I	G	....	QV	KEG	D	E	I	I	G	S	E	T	K	V	V	K	N	K	M	A	P	P	F	R	E	A	I	F	Q	I	L	Y	G	K	G	V	N	Q	L	G	E	L	V	D	L	A	V	Q	Q	N	I	V	Q	K	A	G	A	W	S	Y	Q	293										
NTDB id 1074	ABD1	RS10195	WP	000344167.1	SVRLD	I	R	R	I	G	....	QV	KEG	D	E	I	V	G	S	E	T	K	V	V	K	N	K	M	A	P	P	F	K	E	A	I	F	Q	I	L	Y	G	K	G	T	N	Q	L	G	E	L	V	D	L	A	V	Q	Q	D	I	V	Q	K	A	G	A	W	S	Y	Q	293										
consensus					**!***!*		*	**	*****!*****!*****!*	*	*****!*!***	*****	*	***	!	*****!																																																																	



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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 408 SMU RS09530 WP 002262392.1	D..	383
NTDB id 453 Spy49 1753c ACI62003.1	D..	378
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NTDB id 625 LCA RS02525 WP 011374196.1	...	355
NTDB id 1313 DR RS12030 WP 010888966.1	...	363
NTDB id 1245 Cj1673c YP 002345041.1	...	343
NTDB id 1214 NCTC11637 00359 SQJ03206.1	...	347
NTDB id 1211 C694 RS00795 WP 000963128.1	...	347
NTDB id 1334 RAOC RS04870 WP 004918236.1	...	343
NTDB id 67518 GJW30 RS11385 WP 096355372.1	...	357
NTDB id 1389 A4U84 RS07560 WP 021112712.1	...	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	...	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	...	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	...	348
NTDB id 1427 RS RS02760 WP 011000510.1	...	352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	...	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	...	354
NTDB id 1205 PSJM300 05545 AFN77183.1	...	347
NTDB id 1022 ACIAD RS06390 WP 004925639.1	...	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	...	349

consensus

 non conserved  
 similar  
 ≥ 50% conserved