

NTDB id	1323	RAOC RS07335 WP 004916218.1	.MLVVKYVGSAIHGVSAQTTITTEVNVDQGV.GYHLVLGLPDNATKESSHRISAAIKNVGYKLPCKKITINMAPADLRKEGSA	78
NTDB id	1271	LPP RS03220 WP 011213198.1	MSLAFTKTRSTIGTIVAQPVSVEVHLSNGLPSFTMVGLAETAVKESKDVRVSAIINSQFEFPCRKITVNLGPANLPKTGSG	80
NTDB id	1248	GCO85 RS03150 WP 011213198.1	MSLAFTKTRSTIGTIVAQPVSVEVHLSNGLPSFTMVGLAETAVKESKDVRVSAIINSQFEFPCRKITVNLGPANLPKTGSG	80
NTDB id	1003964	AHF5 FS23675 WP 039269486.1	MSLVVVYIRAAIGVKAPLISVEVHLSNGLPGLTLVGLPETTVKEARDRVRSAINSGYAFPAKKITINLAPADLPKEGGGR	80
NTDB id	1397	DSB67 RS15690 WP 005535577.1	MGLAIITHSRASVGVQAAPSVSVEVHLSNGMPGFTLVGLPETTVKESKDVRVSAIVNSNFQFPAKRITVNLAPADLPKEGGGR	80
NTDB id	1153	A1552VC RS00115 WP 000521788.1	MGLAIITHSRASIGVQAAPPVTVEVHLSNGMPGFTLVGLPETTVKESRDVRVSAIINSRFEPFAKRITVNLAPADLPKEGGGR	80
NTDB id	1349	HI 1117 AAC22771.1	MSLAIVYSRASMGVQAAPLVTTIEVHLSNGKPFGFTLVGLPEKTVKEAQDVRVSAIMNAQFKYPAKRITVNLAPADLPKEGGGR	80
NTDB id	1387	A4U84 RS06900 WP 020457569.1	MSLAIIYSRASIGVEAPLVTTIEVHSNGSPGLTLVGLPEKS VKEAQRDVRVSAIMNANFDYPARRITINLAPADLPKEGGGR	80
consensus			*:*:*:*:*:*:*:*:*:*:*:*:*:*!*:*:*:*!*:*:*:*!*:*:*!*:*:*!*:*:*!*:*!*	

NTDB id	1323	RAOC RS07335 WP 004916218.1	YDLSTALGILAASGGTIIAPEITERYLIMGELSLDGGGLQPIKGVLPATIRAREEGFGKITIIPKQNTREAAIVNDLEVYGVEN	158
NTDB id	1271	LPP RS03220 WP 011213198.1	FDPILPALGILAASEQIPLTNLANHEFIGELALSSELRGVSAITPAVLAAHKD.NQHLLIANANAAEASLTGHQKVFTANN	159
NTDB id	1248	GC085 RS03150 WP 011213198.1	FDPILPALGILAASEQIPLTNLANHEFIGELALSSELRGVSAITPAVLAAHKD.NQHLLIANANAAEASLTGHQKVFTANN	159
NTDB id	1003964	AHF5 FS23675 WP 039269486.1	YDLPIAIALLAASEQINPTNGLSSCEFFVGELALTGALRGVPGCATGALEAIRA.GRQITIVANENAEVSLSIAEKGCCLVAGH	159
NTDB id	1397	DSB67 RS15690 WP 005535577.1	FDPILPALGILAASEQIATDKLKNYEFVVGELALSGGLRTVKGVLPAAALAANKK.QRHLLVPHANGDQAALVGKEQHKSAQS	159
NTDB id	1153	A1552VC RS00115 WP 000521788.1	FDPILPALGILAASDQIARNKLESYEFIGELALTSELRGVKGVLPAALAANKV.ERCLVVPHNSCDQAALVGVERHKSAAQS	159
NTDB id	1349	HI 1117 AAC22771.1	FDPILPAILGILAASDQLDASHKQFEFVAELALTGQLRGVHGVPAILAAQKS.KRELTIAKQNANEASLVSDQNTYFAQT	159
NTDB id	1387	A4U84 RS06900 WP 020457569.1	FDPILPALGILAASQQIDSDKLKRIELLGELSLTGHLRGVHGAPAVLAASKA.KREITIVPQQNANEVSLSVNTQTYYCAST	159
consensus			*!!*!!**!!!!!!*!* * **!!!*!?!*****!!*?***!!*!*****!!*?***!!*!*****!!*?***!!*!	

NTDB id	1323	RAOC RS07335 WP	004916218.1	IKEVIDFFNENCPLEPTKVNTREEFHKRVNLFPFDFSEVKGGQETAKRAMEVAAGGHNHLLIGPPGSGKTMLAKRIPSL	238
NTDB id	1271	LPP RS03220 WP	011213198.1	IREVCDYLCCGTSLQLSPKPDL...LLNNYELDWSDIKGQQHAKNAMVIAACGGHSILLSCAPCSGKTMMAKRFSTLL	235
NTDB id	1248	GCO85 RS03150 WP	011213198.1	IREVCDYLCCGTSLQLSPKPDL...LLNNYELDWSDIKGQQHAKNAMVIAACGGHSILLSCAPCSGKTMMAKRFSTLL	235
NTDB id	1003964	AHF53 RS23675 WP	039269486.1	LQEVCANLEGRHELAEPCQENDEVE...APDSPEDLDIMGGEQCKRALEITAAAGCHNLLLIGPPGTGKTMLASRLSGLL	234
NTDB id	1397	DSB67 RS15690 WP	005535577.1	LLEVCAELCGQHQLNLYQTTPKKK...ELKAHGRDLQDIIQGQQCKRALEIAAAGCHNLLFLGPPGTGKTMLASRLCDLL	235
NTDB id	1153	A1552VC RS00115 WP	000521788.1	LLEVCAELCGQHQLNLYQTTPKKK...ELKAHGRDLQDIIQGQQCKRALEIAAAGCHNLLFLGPPGTGKTMLASRLCDLL	235
NTDB id	1349	HI 1117 AAC22771.1		LLDVVVQFLNGQEKPLATEIVKESAVNFSGKNTLDLTDIIGQQHAKRALTIAAAGQHNNLLFLGPPGTGKTMLASRLTGLL	239
NTDB id	1387	A4U84 RS06900 WP	020457569.1	LLQVNVFLNNRDQLPIAQQLSQNIAEN.RPLVSRDLTDIIGQQHAKRALTIAAAGQHNNLLFLGPPGTGKTMLASRLADLL	238
consensus				* * ! * * * *	

NTDB id 1323	RAOC RS07335 WP 004916218.1	PP	LT	LK	E	A	E	T	T	K	T	H	S	V	A	G	K	M	G	A	E	T	S	L	M	T	I	R	P	F	R	S	P	H	H	T	I	S	D	V	A	L	V	G	G	G	S	Y	P	Q	P	G	E	I	S	L	A	H	N	G	V	L	F	L	D	E	M	P	E	F	K	R	T	V	L	E	V	318			
NTDB id 1271	LPP RS03220 WP 011213198.1	P	E	L	S	E	T	T	A	E	C	A	A	I	N	S	I	R	G	K	L	P	D	F	.	R	E	W	R	L	P	P	F	R	A	P	H	H	T	A	S	P	V	A	L	V	G	G	G	N	P	P	K	P	G	E	I	S	L	A	H	N	G	V	L	F	L	D	E	L	P	E	F	N	R	Q	V	L	E	T	314
NTDB id 1248	GC085 RS03150 WP 011213198.1	P	E	L	S	E	T	T	A	E	C	A	A	I	N	S	I	R	G	K	L	P	D	F	.	R	E	W	R	L	P	P	F	R	A	P	H	H	T	A	S	P	V	A	L	V	G	G	G	N	P	P	K	P	G	E	I	S	L	A	H	N	G	V	L	F	L	D	E	L	P	E	F	N	R	Q	V	L	E	T	314
NTDB id 1003964	ABHF53 RS23675 WP 039269486.1	P	P	I	N	N	H	E	A	E	S	A	A	I	F	S	L	V	S	S	T	S	L	H	.	K	Q	W	R	R	P	P	F	R	S	P	H	S	A	S	I	T	A	M	V	G	G	G	S	I	P	K	P	G	E	I	S	L	A	H	N	G	I	L	F	L	D	E	L	P	E	F	E	R	K	V	L	D	A	313	
NTDB id 1397	DSB67 RS15690 WP 005535577.1	P	E	M	S	D	E	E	A	M	E	T	A	S	V	A	S	L	T	Q	S	E	I	N	E	.	H	N	W	K	T	R	P	F	R	A	P	H	H	S	S	M	A	A	L	V	G	G	G	S	V	P	R	P	G	E	I	S	L	A	H	N	G	I	L	F	L	D	E	M	P	E	F	D	R	K	V	L	D	S	314
NTDB id 1153	A1552VC RS00115 WP 000521788.1	P	E	M	S	D	E	E	A	M	E	T	A	S	I	A	S	L	T	Q	S	E	I	N	Q	.	H	N	W	K	L	R	P	F	R	A	P	H	H	S	S	M	A	A	L	V	G	G	G	T	I	P	R	P	G	E	I	S	L	A	H	N	G	I	L	F	L	D	E	M	P	E	F	E	R	K	V	L	D	S	314
NTDB id 1349	HI 1117 AAC22771.1	P	E	M	T	D	L	E	A	T	E	A	S	V	T	S	L	V	Q	N	E	L	N	F	.	H	N	W	K	Q	R	P	F	R	A	P	H	H	S	A	S	M	P	A	L	V	G	G	G	T	I	P	K	P	G	E	I	S	L	A	T	N	G	V	L	F	L	D	E	L	P	E	F	E	R	K	V	L	D	A	318
NTDB id 1387	A4U84 RS06900 WP 020457569.1	P	E	M	E	D	E	A	E	T	A	S	V	T	S	L	V	Q	N	E	L	N	F	.	Q	N	W	K	R	P	F	R	S	P	H	S	A	S	M	V	A	L	V	G	G	G	S	I	P	K	P	G	E	I	S	L																									

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NTDB id 1323 RAOC RS07335 WP 004916218.1	LREPLESGEIIISRAAKIIFPAFQLYAAMNPSPTCGYGQONRTTPQQLRYLRLSGPFLDRFDMSIEIPALPQG	397
NTDB id 1271 LPP RS03220 WP 011213198.1	MRQPLEDRVITISRAKFTVNYPASFMLVASMNPSPSGFFPDDPNNT.SSSFEMQRYLNKLSGPLLDRIDITHIEVQKVVEFD	394
NTDB id 1248 GC085 RS03150 WP 011213198.1	LREPLESGHICISRAAAQIEFPAKFQLIAAMNPPCGQWGNSSQANCMCTPDRIISRYLAKLSAPLLDRIDMQVTIHALSQE	394
NTDB id 1003964 ABHF53 RS23675 WP 039269486.1	LREPLESGHICISRAAAQIEFPAKFQLIAAMNPPCGQWGNSSQANCMCTPDRIISRYLAKLSAPLLDRIDMQVTIHALSQE	391
NTDB id 1397 DSB67 RS15690 WP 005535577.1	LREPESGEIHLSTRAKISYPAQFQLVAAMNPSPTGHHYQGNHN..RCTPEQTLRYLSKLSGPFLLDRFDLSLEIPLPPPG	392
NTDB id 1153 A1552VC RS00115 WP 000521788.1	LREPLESGEIIISRAQKTRFPAQFQIVGALNPSPTGYYEGNQA..RTNPQATILRYLGRLSGPLLDRFDMSLEIPALPKG	392
NTDB id 1349 HI 1117 AAC22771.1	LREPLESGEIVISRAQKTRFPAQFQIVGALNPSPTGYYEGSSQA..RANPQSILRYLSRLSGPLLDRFDMSIEIPALPKG	396
NTDB id 1387 A4U84 RS06900 WP 020457569.1	LRQPLESGEIIISRAANAKIQFPAQFQIVGALNPSPTGHHYTGTHN..RTSPQQIMRYLNRLSGPFLLDRFDLSIEVPLLPQG	395
consensus	*!***** *!!* *** *!!*!*****!!*!!* * ** * ** *!!!! *!!!!*!!!!*!!!!***** ** *	

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NTDB id 1323 RAOC RS07335 WP 004916218.1	QNSD..KRKGESSEIRQVRLKAREIQQERYQDLAISYNAQMGPKEIEHFCELDVSLLLTKNAMEKLNLSARAYDRILK	475
NTDB id 1271 LPP RS03220 WP 011213198.1	ELIKPNTHLEKQSLAIQREKVTMKHEIQMARQDS...LNANLNSKTCCEMVCELGSEEQLFLREVMSKLLKLSARGYHRLK	470
NTDB id 1248 GC085 RS03150 WP 011213198.1	ELIKPNTHLEKQSLAIQREKVTMKHEIQMARQDS...LNANLNSKTCCEMVCELGSEEQLFLREVMSKLLKLSARGYHRLK	470
NTDB id 1003964 ABHF53 RS23675 WP 039269486.1	LLRQT.GIRGESSATVRRVIAAQAQYARQNR...LNARLDNSGITRQFCSLNAEDAGWLEETLTRFGLSTRAWQRLK	466
NTDB id 1397 DSB67 RS15690 WP 005535577.1	TLSEG.GDRGEPTAIVKERVNQARDCLARSGK...VNALLGSREIEAFQPLQKSDAEFLENALHRLGLSIRAYHRIK	467
NTDB id 1153 A1552VC RS00115 WP 000521788.1	TLANG.GDRGESTAAVRQRVVVARERMLARSGK...VNALLQSREIEQYCPLLKADAEFLESALHRLGLSIRAYHRIK	467
NTDB id 1349 HI 1117 AAC22771.1	SLQNT.GDRGETSAQVREKVLKVREIQMERAGK...INAYLNSKEIERDCKLNDKDAFFLEKALNKLGLSVRAYHRILK	471
NTDB id 1387 A4U84 RS06900 WP 020457569.1	ALQNNTDQRGETTEQARKRVLEARHLQFNRRGK...INAQLTTKEIEQDCKLITDRDALFLENALTKLGLSVRAYHRILK	471
consensus	! ***** *!!!! *!!!!*! *****! * *!!* * ***** ! ! ** *** ** *!!!!*!!*!!!!*!!*	

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NTDB id 1323 RAOC RS07335 WP 004916218.1	VSRTIADLERETNIQSHHIAEAIQYRSILDRDFWKV.....	510
NTDB id 1271 LPP RS03220 WP 011213198.1	VSRTIADMNSSKKVLLNHLQQAISYKQNLHLPK.....	503
NTDB id 1248 GC085 RS03150 WP 011213198.1	VSRTIADMNSSKKVLLNHLQQAISYKQNLHLPK.....	503
NTDB id 1003964 ABHF53 RS23675 WP 039269486.1	VARTVADVEGCPGTEIRRHLEALSRYAIDRLLHLQKMLA	506
NTDB id 1397 DSB67 RS15690 WP 005535577.1	VARTIADLEGSPQIERTHLAEALGYRAMDRLLKQLTAQAV	507
NTDB id 1153 A1552VC RS00115 WP 000521788.1	VARTIADLQGEAQIARPHLAEALGYRAMDRLLKQLSAQNV	507
NTDB id 1349 HI 1117 AAC22771.1	VSRTIADLQGEQIFQPHLAEALGYRAMVRLKQLSNM..	509
NTDB id 1387 A4U84 RS06900 WP 020457569.1	VSRTIADLAGEAQIQPHLAEALGYRAMDRLLQRLQGES.	510
consensus	!*****! * * * *!***** * * * *!	

- X non conserved
- X similar
- X ≥50% conserved