

NTDB id	1323	RAOC RS07335 WP 004916218.1	.MLVVKVYGS A IHGVSAQTITTEVNVDQGV.GYHLVLGLPDNATIKESSHRISAAIKNVGYKLPGKKITINMAPADLRKEGSA	78
NTDB id	1271	LPP RS03220 WP 011213198.1	MSLAFTKTRSTIGTIVAQPVSVEVHI.SNGLPSTFMVGLAETAVKESKDRVRSAIINSQFEFPCRKITVNLGPANLPKTGSG	80
NTDB id	1248	GC085 RS03150 WP 011213198.1	MSLAFTKTRSTIGTIVAQPVSVEVHI.SNGLPSTFMVGLAETAVKESKDRVRSAIINSQFEFPCRKITVNLGPANLPKTGSG	80
NTDB id	1028640	AB4086 RS21195 WP 023307178.1	MSLSVVYYIRAAIGVKAPLISVEVHI.SNGLPGLTLVGLPETTVKEARDVRSAIINSGYAFPAKKITINLAPADLPKEGGR	80
NTDB id	1397	DSB67 RS15690 WP 005535577.1	MGLAIITHSRASVGVAQPSVSVEVHI.SNGMPGFTLVGLPETTVKESKDRVRSAIVNSNFQFPAKRITVNLAPADLPKEGGR	80
NTDB id	1153	A1552VC RS00115 WP 000521788.1	MGLAIITHSRASIGVQAAPPVTVEVHI.SNGMPGFTLVGLPETTVKESRDVRSAIINSRFEFPAKRITVNLAPADLPKEGGR	80
NTDB id	1349	HI 1117 AAC22771.1	MSLAIVYSRASMGVQAPLVTIEVHI.SNGKPFGFTLVGLPEKTVKEAQDVRVSALMNAQFKYPAKRITVNLAPADLPKEGGR	80
NTDB id	1387	A4U84 RS06900 WP 020457569.1	MSLAIIYSRASIGVEAPLVTIEVHI.SGGSPGLTLVGLPEKS VKEAQDVRVSALMNANFDYPARRITINLAPADLPKEGGR	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	1028640	A4B086 RS21195 WP 023307178.1	YDLPIAIALLAASEQITNPTGLSSSECFVGELALTGALRGVPGCATSGALEAIRA.GRQITIVANENAEVSLSIAEKGCCLVAGH	159
NTDB id	1397	DSB67 RS15690 WP 005535577.1	FDPILPALGILAASEQIATDKLKNYEFVVGELALSGGLRTVKGVLPAAALAANKK.QRHVVPHANGDQAALVKGKEQHKSAQS	159
NTDB id	1153	A1552VC RS00115 WP 000521788.1	FDPILPALGILAASDQIARNKLESYEFIGELALSGELRGVKGVLPAALAANKV.ERCLVVPHSNGDQAALVGVERHKSAQS	159
NTDB id	1349	HI 1117 AAC22771.1	FDPPIAIALGILAASDQLDASHKQFEFVAELATLGQLRGVHGVIAPAILAAQKS.KRELIIAKQNANEASLVSDQNTYFAQT	159
NTDB id	1387	A4U84 RS06900 WP 020457569.1	FDPPIAIALGILAASQQIDSDKLKRIELLGELSITGHLRGVHGAIAPAVLAASKA.KRETIIVPQQNANEVSVLSNTQTYYCAST	159
consensus			*!!*!!**!!!!!!*!* * * * * !!*! * * * * !!*! * * * * !!*! * * * * !!*! * * * *	

NTDB id 1323	RAOC RS07335 WP 004916218.1	I	K	E	V	I	D	F	F	N	E	N	C	P	L	E	P	T	K	V	N	T	R	E	E	F	H	K	R	V	N	L	F	P	F	D	F	S	E	V	K	G	Q	E	T	A	K	R	A	M	E	V	A	A	A	G	G	H	N	I	L	I	G	P	P	G	S	G	K	T	M	L	A	K	R	I	P	S	I	L		238
NTDB id 1271	LPP RS03220 WP 011213198.1	L	R	E	V	C	D	L	C	Q	G	T	S	L	Q	S	L	P	P	K	P	D	L	...	L	N	N	Y	E	L	D	W	S	D	I	K	G	Q	Q	H	A	K	N	A	M	V	I	A	A	C	G	G	H	S	I	L	L	S	C	A	P	G	S	G	K	T	M	A	K	R	F	S	T	L	L		235					
NTDB id 1248	GC085 RS03150 WP 011213198.1	L	R	E	V	C	D	L	C	Q	G	T	S	L	Q	S	L	P	P	K	P	D	L	...	L	N	N	Y	E	L	D	W	S	D	I	K	G	Q	Q	H	A	K	N	A	M	V	I	A	A	C	G	G	H	S	I	L	L	S	C	A	P	G	S	G	K	T	M	A	K	R	F	S	T	L	L		235					
NTDB id 1028640	AB4086 RS21195 WP 023307178.1	L	Q	E	V	C	A	L	E	G	R	H	E	L	A	E	P	K	N	E	E	V	...	V	A	D	S	P	D	L	S	D	I	G	Q	E	Q	K	R	A	L	E	I	T	A	A	G	G	H	N	L	I	L	G	P	P	G	T	G	K	T	M	L	A	S	R	L	S	G	L	L		234									
NTDB id 1397	DSB67 RS15690 WP 005535577.1	L	L	E	V	C	A	E	L	C	G	Q	H	L	N	L	Y	Q	T	P	K	K	...	E	L	K	A	H	G	R	D	L	Q	D	I	I	G	Q	Q	Q	K	R	A	L	E	I	A	A	A	G	N	H	N	L	L	F	L	G	P	P	G	T	G	K	T	M	L	A	S	R	L	C	D	L	L		235					
NTDB id 1153	A1552VC RS00115 WP 000521788.1	L	L	E	V	C	A	D	L	C	G	Q	Q	T	S	L	F	Q	S	S	P	S	V	...	Q	Q	V	S	Q	T	R	D	L	Q	D	I	I	G	Q	Q	Q	K	R	A	L	E	I	A	A	A	G	N	H	N	L	L	F	L	G	P	P	G	T	G	K	T	M	L	A	S	R	L	C	D	L	L		235				
NTDB id 1349	HI 1117 AAC22771.1	L	L	D	V	V	Q	F	L	N	G	Q	E	K	L	P	L	A	T	E	I	V	K	E	S	A	V	N	F	S	G	K	N	T	L	D	L	T	D	I	I	G	Q	Q	H	A	K	R	A	L	T	I	A	A	A	G	Q	H	N	L	L	F	L	G	P	P	G	T	G	K	T	M	L	A	S	R	L	T	G	L		239
NTDB id 1387	A4U84 RS06900 WP 020457569.1	L	L	Q	V	N	F	L	N	N	R	D	L	P	I	A	Q	Q	L	S	Q	N	I	A	E	N	R	P	L	V	S	R	D	L	T	D	I	I	G	Q	Q	H	A	K	R	A	L	I	I	A	A	S	G	Q	H	N	L	L	F	L	G	P	P	G	T	G	K	T	M													

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	Q	A	E	C	A	A	I	N	S	I	R	G	K	L	P	D	F	.	R	E	W	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	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	Q	A	E	C	A	A	I	N	S	I	R	G	K	L	P	D	F	.	R	E	W	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	G	V	L	F	L	D	E	L	P	E	F	N	R	Q	V	L	E	T	314		
NTDB id 1028640	AB4086 RS21195 WP 023307178.1	P	P	I	N	N	H	E	A	E	S	A	A	I	F	S	L	V	S	S	I	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	R	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	T	E	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	A	H	N	G																					

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NTDB id 1323 RAOC RS07335 WP 004916218.1	LREPLESGEIISRAAKIEFPAFQLYAAMNPSPGCHYGSQNRITTPQQLRYLRLSGPFLDRFDMSEIEIPALPQG	397
NTDB id 1271 LPP RS03220 WP 011213198.1	MRQPLEDRVETISRAKFTVNPASFMLVASMNPSPSGFFPDDPNNT.SSSFEMQRYLNKLSGPLLDRIDITHIEVQKVVEFD	394
NTDB id 1248 GC085 RS03150 WP 011213198.1	LREPLESGHICISRAAAQIEFPAKFQLIAAMNPPCGQWGNSSQANCMCTPDRIISRYLAKLSAPLLDRIDMQVTIHALSQE	394
NTDB id 1028640 AB4086 RS21195 WP 023307178.1	LREPLESGHICISRAAAQIEFPAKFQLIAAMNPPCGQWGNSSQANCMCTPDRIISRYLAKLSAPLLDRIDMQVTIHALSQE	391
NTDB id 1397 DSB67 RS15690 WP 005535577.1	LREPLESGEIISRAAQKTRFPAQFQIVGALNPSPGTGYEGNQAA..RTNPQATILRYLGRLSGPPLDRFDMSEIPALPKG	392
NTDB id 1153 A1552VC RS00115 WP 000521788.1	LREPLESGEIVISRAAQKTRFPAQFQIVGALNPSPGTGYEGSSQA..RANPQSILRYLSRLSGPPLDRFDMSEIPALPKG	392
NTDB id 1349 HI 1117 AAC22771.1	LRQPLESGEIISIRANAKIQFPAQFQIVGALNPSPGTGHYTGTHN..RTSPQQIMRYLNRLSGPFLDRFDMSEIVPLLPQG	396
NTDB id 1387 A4U84 RS06900 WP 020457569.1	LRQPLESGEIISIRANAKVQFPAQFQIVGALNPSPGTGHYQGTTHN..RTSPQQIMRYLNRLSGPFLDRFDMSEIVPLLPQG	395
consensus	*!*!*!*!*!* *!*! * * * * *!*!*!*!*!*!*!*!* * * * * * * * * * * * * * * * * *	

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NTDB id 1323 RAOC RS07335 WP 004916218.1	LSD..KRKGESSEIRQVRLKAREIQQERYQDLAISYNAQMGPKEIEHFCELDEVSLLLIKNAMEKLNLSARAYDRILK	475
NTDB id 1271 LPP RS03220 WP 011213198.1	ELIKPNTHLEKQSLAIQREKVTMKHEIQMARQDS...LNANLNSKTCCEMVCELGSEEQFLREVMSKIKLSARGYHRLK	470
NTDB id 1248 GC085 RS03150 WP 011213198.1	ELIKPNTHLEKQSLAIQREKVTMKHEIQMARQDS...LNANLNSKTCCEMVCELGSEEQFLREVMSKIKLSARGYHRLK	470
NTDB id 1028640 AB4086 RS21195 WP 023307178.1	LLRQT.GIKGESSAAVRERVIAAQAQYARQNR...LNARLDNSGTRQFCSLNAEDAGWLEETLTFGLSTRAWQRLK	466
NTDB id 1397 DSB67 RS15690 WP 005535577.1	TLSEG.GDRGEPTAIVKERVNQARDCLARSGK...VNALLGSREIEAFQPLQKSDAEFLENALHRLGLSIRAYHRIK	467
NTDB id 1153 A1552VC RS00115 WP 000521788.1	TLANG.GDRGESTAAVRQRVVVARERMLARSGK...VNALLGSREIEQYCPLLKADAEFLESALHRLGLSIRAYHRIK	467
NTDB id 1349 HI 1117 AAC22771.1	SLQNT.GDRGETSAQVREKVLKVREIQMERAGK...INAYLNSKEIERDCKLNDKDAFFLEKALNKLGLSVRAYHRILK	471
NTDB id 1387 A4U84 RS06900 WP 020457569.1	ALQNNTDQRGETTEQARKRVLEARHLQFNRRGK...INAQLTKEIEQDCKLTDRDALFLENALTKLGLSVRAYHRILK	471
consensus	! *	

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NTDB id 1323 RAOC RS07335 WP 004916218.1	VSRTIADLERETNIQSHHIAEAIQYRSLDRDFWKV.....	510
NTDB id 1271 LPP RS03220 WP 011213198.1	VSRTIADMNSSKKVLLNHLQQALSQKQNLHLPK.....	503
NTDB id 1248 GC085 RS03150 WP 011213198.1	VSRTIADMNSSKKVLLNHLQQALSQKQNLHLPK.....	503
NTDB id 1028640 AB4086 RS21195 WP 023307178.1	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	VSRTIADLQGEQQIFQPHLAEALGYRAMVRLKQLSNM..	509
NTDB id 1387 A4U84 RS06900 WP 020457569.1	VSRTIADLAGEAQIQPHLAEALGYRAMDRLLQRLQGES.	510
consensus	! *	

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