

NTDB id 587 KW2 RS10850 WP 042211510.1	MQTDILRLLRPKGKKLALIKQAKLIQLMGNLNNGFNLGEVINFLALSKLVEKBFVFKMHQGLSSGKSLSEILESLSF	78
NTDB id 430 SGO RS09415 WP 012130941.1	...MISFLQQDISILSKQKQKKLGTSSKQKQVIELFNLFSSGFHLAETVDFLGRSALLEKNYVQQMRQGLANCQAFSEIMASLGF	82
NTDB id 271 KZH43 RS09260 WP 074196785.1	MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSFSEMMESLGC	76
NTDB id 230 SPD RS09890 WP 074196785.1	MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSFSEMMESLGC	76
NTDB id 196 SPR RS09425 WP 074196785.1	MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSFSEMMESLGC	76
NTDB id 161 SP RS10375 WP 074196785.1	MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSFSEMMESLGC	76
NTDB id 529 SMSK321 RS09235 WP 080550783.1	MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRTDLSQGKSFSEMMESLGF	76
NTDB id 501 SM12261 RS00950 WP 004238896.1	MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRAGLSQGKSFSEMMESLGF	76
NTDB id 114927 W903 RS01120 WP 228313184.1	MDKWISWLKKDISVRNRHHSKKLSLKKQRKVVQLFNLFASGFSLTDMVTFLRKSKLLSDCYTDRMKNKALLEGKDLSSKMLGELGF	85
NTDB id 395 FSA28 RS09400 WP 257638827.1	MTFLQQDISLKEKHKQKKLKIKKQRKVIQLFNLFITSGFNLTEIIDFLERSHLLAEIYTKKMRQGLLNLGLHLAEIMSSSLGF	81
NTDB id 386 SMU RS09030 WP 255262721.1	MTFLQQDISLKEKHKQKKLKIKKQRKVIQLFNLFITSGFNLTEIIDFLERSHLLAEIYTKKMRQGLLNLGLHLAEIMSSSLGF	81
consensus	*****M*****Q*****D*****I*****L*****R*****L*****R*****P*****G*****K*****K*****L*****A*****L*****I*****K*****Q*****A*****K*****L*****I*****Q*****L*****M*****G*****N*****L*****N*****N*****G*****F*****N*****L*****G*****E*****V*****I*****N*****F*****L*****A*****L*****S*****K*****L*****V*****E*****K*****B*****F*****V*****F*****K*****M*****H*****Q*****G*****L*****S*****S*****G*****K*****S*****L*****S*****E*****I*****L*****E*****S*****L*****S*****F*****	

NTDB id 587	KW2 RS10850 WP 042211510.1	SKN	V	T	Q	L	A	L	V	E	V	H	G	N	L	V	G	T	M	Q	L	V	E	L	H	L	K	K	Q	L	V	K	K	K	L	I	E	V	A	T	P	V	V	L	L	V	F	L	I	G	I	M	W	G	L	K	N	Y	L	L	P	Q	L	D	K	G	N	F	A	T	L	L	I	N	H	L	P	L	V	F	163			
NTDB id 430	SGO RS09415 WP 012130941.1	S	D	A	V	T	Q	L	S	L	A	E	L	H	G	N	L	S	L	A	L	L	K	I	E	E	Y	L	D	N	L	A	K	V	K	K	L	I	E	V	A	T	P	M	M	L	L	G	F	L	V	L	I	M	I	T	G	L	R	N	Y	L	L	P	Q	L	S	S	Q	N	F	A	T	Q	L	I	G	H	L	P	T	I	F	166
NTDB id 271	KZH43 RS09260 WP 074196785.1	S	S	A	I	V	T	Q	L	S	L	A	E	V	H	G	N	L	H	L	S	L	G	K	I	E	E	Y	L	D	N	L	A	K	V	K	K	L	I	E	V	A	T	P	L	I	L	L	G	F	L	L	I	M	L	G	L	R	N	Y	L	L	P	Q	L	D	S	S	N	I	A	T	Q	I	I	G	N	L	P	Q	I	F	160	
NTDB id 230	SPD RS09890 WP 074196785.1	S	S	A	I	V	T	Q	L	S	L	A	E	V	H	G	N	L	H	L	S	L	G	K	I	E	E	Y	L	D	N	L	A	K	V	K	K	L	I	E	V	A	T	P	L	I	L	L	G	F	L	L	I	M	L	G	L	R	N	Y	L	L	P	Q	L	D	S	S	N	I	A	T	Q	I	I	G	N	L	P	Q	I	F	160	
NTDB id 196	SPR RS09425 WP 074196785.1	S	S	A	I	V	T	Q	L	S	L	A	E	V	H	G	N	L	H	L	S	L	G	K	I	E	E	Y	L	D	N	L	A	K	V	K	K	L	I	E	V	A	T	P	L	I	L	L	G	F	L	L	I	M	L	G	L	R	N	Y	L	L	P	Q	L	D	S	S	N	I	A	T	Q	I	I	G	N	L	P	Q	I	F	160	
NTDB id 161	SP RS10375 WP 074196785.1	S	S	A	I	V	T	Q	L	S	L	A	E	V	H	G	N	L	H	L	S	L	G	K	I	E	E	Y	L	D	N	L	A	K	V	K	K	L	I	E	V	A	T	P	L	I	L	L	G	F	L	L	I	M	L	G	L	R	N	Y	L	L	P	Q	L	D	S	S	N	I	A	T	Q	I	I	G	N	L	P	Q	I	F	160	
NTDB id 529	SMSK321 RS09235 WP 080550783.1	S	S	A	I	V	T	Q	L	S	L	A	E	V	H	G	N	L	H	L	S	L	G	K	I	E	E	Y	L	D	N	L	A	K	V	K	K	L	I	E	V	A	T	P	L	I	L	L	G	F	L	L	S	I	M	L	G	L	R	N	Y	L	L	P	Q	L	D	S	S	N	I	A	T	Q	I	I	G	N	L	P	Q	I	F	160
NTDB id 501	SM12261 RS00950 WP 004238896.1	S	S	A	I	V	T	Q	L	S	L	A	E	V	H	G	N	L	H	L	S	L	G	K	I	E	E	Y	L	D	N	L	A	K																																																		

NTDB	id	587	KW2	RS10850	WP	042211510.1	F	S	V	G	A	L	I	V	L	L	T	S	L	S	I	I	F	K	H	I	S	A	L	T	N	F	T	L	V	K	V	P	L	V	S	S	F	I	R	L	Y	L	T	A	Y	F	S	R	E	W	G	N	L	I	A	Q	G	V	E	L	R	Q	I	I	E	L	M	K	K	Q	K	S	R	L	F	A	E	V	G	I	K	L	D	248
NTDB	id	430	SGO	RS09415	WP	012130941.1	L	L	T	V	L	M	L	G	L	T	G	A	I	Y	L	V	F	K	G	K	R	I	P	V	S	F	L	A	R	L	P	F	V	G	S	F	V	R	I	Y	L	T	A	Y	A	R	E	W	G	N	M	I	G	Q	G	L	E	S	Q	I	F	Q	I	M	Q	E	Q	R	S	V	L	F	Q	E	I	G	Q	D	L	C	251			
NTDB	id	271	KZH43	RS09260	WP	074196785.1	L	G	M	V	G	L	V	S	V	L	A	L	L	A	L	T	F	Y	K	R	S	K	M	S	V	F	S	I	L	A	R	L	P	F	I	G	I	F	V	Q	T	Y	L	T	A	Y	A	R	E	W	G	N	M	I	S	Q	G	M	E	L	T	Q	I	F	Q	M	M	Q	E	Q	S	L	F	K	E	V	G	Q	D	L	A	245		
NTDB	id	230	SPD	RS09890	WP	074196785.1	L	G	M	V	G	L	V	S	V	L	A	L	L	A	L	T	F	Y	K	R	S	K	M	S	V	F	S	I	L	A	R	L	P	F	I	G	I	F	V	Q	T	Y	L	T	A	Y	A	R	E	W	G	N	M	I	S	Q	G	M	E	L	T	Q	I	F	Q	M	M	Q	E	Q	S	L	F	K	E	V	G	Q	D	L	A	245		
NTDB	id	196	SPR	RS09425	WP	074196785.1	L	G	M	V	G	L	V	S	V	L	A	L	L	A	L	T	F	Y	K	R	S	K	M	S	V	F	S	I	L	A	R	L	P	F	I	G	I	F	V	Q	T	Y	L	T	A	Y	A	R	E	W	G	N	M	I	S	Q	G	M	E	L	T	Q	I	F	Q	M	M	Q	E	Q	S	L	F	K	E	V	G	Q	D	L	A	245		
NTDB	id	161	SP	RS10375	WP	074196785.1	L	G	M	V	G	L	V	S	V	L	A	L	L	A	L	T	F	Y	K	R	S	K	M	S	V	F	S	I	L	A	R	L	P	F	I	G	I	F	V	Q	T	Y	L	T	A	Y	A	R	E	W	G	N	M	I	S	Q	G	M	E	L	T	Q	I	F	Q	M	M	Q	E	Q	S	L	F	K	E	V	G	Q	D	L	A	245		
NTDB	id	529	SMSK321	RS09235	WP	080550783.1	L	G	M	V	G	L	V	S	L	T	L	L	A	L	T	F	Y	K	R	S	K	M	R	V	F	S	I	L	A	R	I	P	F	L	G	I	F	V	Q	T	Y	L	T	A	Y	A	R	E	W	G	N	M	I	S	Q	G	M	E	L	T	Q	I	F	Q	I	M	Q	E	Q	S	L	F	K	E	I	G	Q	D	L	A	245			
NTDB	id	501	SM12261	RS00950	WP	004238896.1	L	G	M	V	G	F	V	S	V	G	V	L	L	A	L	T	F	Y	K	R	S	K	M	R	V	F	S	I	L	A	R	I	P	F	L	G	I	F	V	Q	T	Y	L	T	A	Y	A	R	E	W	G	N	M	I	S	Q	G	M	E	L	T	Q	I	F	Q	I	M	Q	E	Q	S	L	F	K	E	I	G	Q	D	M	A	245		
NTDB	id	114927	W903	RS01120	WP	228313184.1	L	L	L	L	A	V	V	L	I	F	S	L	I	F	Y	I	V																																																																			

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NTDB id 587 KW2 RS10850 WP 042211510.1	LGLKAGQNF	EQAVSH	FSIFLPELSLMIEYGA	IKDKLGLLELS	VYADECWEQFF	SKIDRLMQLI	IQPLIFIFVALM	IVLLYAAML	LPI	333
NTDB id 430 SGO RS09415 WP 012130941.1	QALQNGQEFS	DKIASYPFF	KKELSLIIIEYGEVKS	KLGSLEIYAL	KTWEEFFG	RVNRTMNL	IQPLVFVFVALM	IVLLYAAML	LPL	336
NTDB id 271 KZH43 RS09260 WP 074196785.1	QTLKNGREFS	QTIGTYPFF	RKELSLIIIEYGEVKS	KLGSLEIYAEKTWEA	FFTRVNRTMNL	VQPLVFIFVALI	IVLLYAAML	MPM	330	
NTDB id 230 SPD RS09890 WP 074196785.1	QTLKNGREFS	QTIGTYPFF	RKELSLIIIEYGEVKS	KLGSLEIYAEKTWEA	FFTRVNRTMNL	VQPLVFIFVALI	IVLLYAAML	MPM	330	
NTDB id 196 SPR RS09425 WP 074196785.1	QTLKNGREFS	QTIGTYPFF	RKELSLIIIEYGEVKS	KLGSLEIYAEKTWEA	FFTRVNRTMNL	VQPLVFIFVALI	IVLLYAAML	MPM	330	
NTDB id 161 SP RS10375 WP 074196785.1	QTLKNGREFS	QTIGTYPFF	RKELSLIIIEYGEVKS	KLGSLEIYAEKTWEA	FFTRVNRTMNL	VQPLVFIFVALI	IVLLYAAML	MPM	330	
NTDB id 529 SMSK321 RS09235 WP 080550783.1	QSLQNGREFS	QTIIATYPFF	KKELSLIIIEYGEVKS	KLGSLEIYAEKTWEA	FFTRVNRTMNL	VQPLVFIFVALI	IVLLYAAML	MPM	330	
NTDB id 501 SM12261 RS00950 WP 004238896.1	HALQNGQEFS	QTIGTYPFF	KKELSLIIIEYGEVKS	KLGSLEIYAEKTWEA	FFTRVNRTMNL	VQPLVFIFVALI	IVLLYAAML	MPM	330	
NTDB id 114927 W903 RS01120 WP 228313184.1	EGFLSGKAF	HQKVLDY	PPFLLTELSLMIEY	GQVKA	KLGTELDIYADEK	WEDFFT	KLARATQLIQPVIF	IFVALIIVMIYAAML	LPM	339
NTDB id 395 FSA28 RS09400 WP 257638827.1	KALLSGQEF	HQKVLDY	PPFLLKELSLMIEY	GEVKS	KLGNELIYAEETWEH	FFAKLKKATQFVQPLIF	VFVAIVIVMIYAAML	LPI	335	
NTDB id 386 SMU RS09030 WP 255262721.1	KALLSGQEF	HQKVLDY	PPFLLKELSLMIEY	GEVKS	KLGNELIYAEETWEH	FFAKLKKATQFVQPLIF	VFVAIVIVMIYAAML	LPI	335	
consensus	***	*!***	*****	*****	*****	*****	*****	*****	*****	*****

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NTDB id 587 KW2 RS10850 WP 042211510.1	YSNMGSGI	341
NTDB id 430 SGO RS09415 WP 012130941.1	YQNMEVHL	344
NTDB id 271 KZH43 RS09260 WP 074196785.1	YQNMEVNF	338
NTDB id 230 SPD RS09890 WP 074196785.1	YQNMEVNF	338
NTDB id 196 SPR RS09425 WP 074196785.1	YQNMEVNF	338
NTDB id 161 SP RS10375 WP 074196785.1	YQNMEVNF	338
NTDB id 529 SMSK321 RS09235 WP 080550783.1	YQNMEVNF	338
NTDB id 501 SM12261 RS00950 WP 004238896.1	YQNMEVNF	338
NTDB id 114927 W903 RS01120 WP 228313184.1	YQNMEILS	347
NTDB id 395 FSA28 RS09400 WP 257638827.1	YQNMEVNL	343
NTDB id 386 SMU RS09030 WP 255262721.1	YQNMEVNL	343
consensus	!***	



☒ non conserved
☒ similar
☒ ≥ 50% conserved