

NTDB	id	602	KW2	RS03060	WP	011834647.1	MGYL	VPTVIEQSSRGERAYDIYSRLKDRIIMLTGPVEDGMANSIIAQLFLDAQDNTKDIIYLYVNTPGGSVSAG	75
NTDB	id	611	V4T04	RS07970	WP	003129593.1	MGYL	VPTVIEQSSRGERAYDIYSRLKDRIIMLTGPVEDGMANSIIAQLFLDAQDNTKDIIYLYVNTPGGSVSAG	75
NTDB	id	312319	D1036	RS01835	WP	002949732.1	MIPV	VIEQTSGERSYDIYSRLKDRIIMLTGPIEDNMANSIIAQLFLDAQDNTKDIIYLYVNTPGGSVSAG	72
NTDB	id	330	STU	RS11365	WP	002949732.1	MIPV	VIEQTSGERSYDIYSRLKDRIIMLTGPIEDNMANSIIAQLFLDAQDNTKDIIYLYVNTPGGSVSAG	72
NTDB	id	298	STER	RS01925	WP	002949732.1	MIPV	VIEQTSGERSYDIYSRLKDRIIMLTGPIEDNMANSIIAQLFLDAQDNTKDIIYLYVNTPGGSVSAG	72
NTDB	id	282	KZH43	RS03215	WP	000613477.1	MIPV	VIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSVIAQLFLDAQDSTKDIIYLYVNTPGGSVSAG	72
NTDB	id	246	SPD	RS03495	WP	000613477.1	MIPV	VIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSVIAQLFLDAQDSTKDIIYLYVNTPGGSVSAG	72
NTDB	id	244	SPR	RS03300	WP	000613477.1	MIPV	VIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSVIAQLFLDAQDSTKDIIYLYVNTPGGSVSAG	72
NTDB	id	242	SP	RS03655	WP	000613477.1	MIPV	VIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSVIAQLFLDAQDSTKDIIYLYVNTPGGSVSAG	72
NTDB	id	446	SpyM6JRS4	RS01695	WP	002985850.1	MIPV	VIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSVIAQLFLDAQDNTKDIIYLYVNTPGGSVSAG	72
NTDB	id	445	SPYM3	RS01720	WP	002985850.1	MIPV	VIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSVIAQLFLDAQDNTKDIIYLYVNTPGGSVSAG	72
NTDB	id	376	SMU	RS07595	WP	255262720.1	MELKEKYS	MIPVVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSIIAQLFLDAQDNTKDIIYLYINSPPGGSVSAG	80
NTDB	id	86	BSU	34540	NP	391334.1	MNL	IPTVIEQTNRGERAYDIYSRLKDRIIMLGSAIDNIVANSIVSQQLLFLAAEDPEKEISLILNSPGGSTITAG	74
NTDB	id	1223	Cj0192c	YP	002343650.1	MFIPY	VIEKSSRGRSYDIYSRLKDRIIMLSGEIHDELAASIVAQLFLAEADPTKDIIYLYINSPGGVITSG	73	
consensus							*****	***!!****!!!**!!!!!!*!!!!!!*!*****!*****!*****!	

NTDB	id	602	KW2	RS03060	WP	011834647.1	LAIVDTMNF	IKS	DVQ	TIV	MGMA	ASM	GT	VI	ASS	G	TG	KRF	ML	PNA	EY	L	I	H	Q	P	M	G	G	A	G	Q	G	T	Q	T	D	M	A	I	V	A	E	Q	L	L	K	R	K	R	L	E	Q	155							
NTDB	id	611	V4T04	RS07970	WP	003129593.1	LAIVDTMNF	IKS	DVQ	TIV	MGMA	ASM	GT	VI	ASS	G	TG	KRF	ML	PNA	EY	L	I	H	Q	P	M	G	G	T	G	Q	G	T	Q	T	D	M	A	I	V	A	E	Q	L	L	K	R	K	R	L	E	Q	155							
NTDB	id	1312319	D1036	RS01835	WP	002949732.1	LAIVDTMNF	IKS	DVQ	TIV	MGMA	ASM	GT	VI	ASS	G	TG	KRF	ML	PNA	EY	M	I	H	Q	P	M	G	G	T	G	G	T	Q	T	D	M	A	I	A	A	E	H	L	L	K	T	R	N	N	L	E	Q	152							
NTDB	id	330	STU	RS11365	WP	002949732.1	LAIVDTMNF	IKS	DVQ	TIV	MGMA	ASM	GT	VI	ASS	G	TG	KRF	ML	PNA	EY	M	I	H	Q	P	M	G	G	T	G	G	T	Q	T	D	M	A	I	A	A	E	H	L	L	K	T	R	N	N	L	E	Q	152							
NTDB	id	298	STER	RS01925	WP	002949732.1	LAIVDTMNF	IKS	DVQ	TIV	MGMA	ASM	GT	VI	ASS	G	TG	KRF	ML	PNA	EY	M	I	H	Q	P	M	G	G	T	G	G	T	Q	T	D	M	A	I	A	A	E	H	L	L	K	T	R	N	N	L	E	Q	152							
NTDB	id	282	KZH43	RS03215	WP	000613477.1	LAIVDTMNF	IKA	DVQ	TIV	MGMA	ASM	GT	VI	ASS	G	A	K	G	R	F	M	L	P	N	A	E	Y	M	I	H	Q	P	M	G	G	T	G	G	T	Q	T	D	M	A	I	A	A	E	H	L	L	K	T	R	N	T	L	E	K	152
NTDB	id	246	SPD	RS03495	WP	000613477.1	LAIVDTMNF	IKA	DVQ	TIV	MGMA	ASM	GT	VI	ASS	G	A	K	G	R	F	M	L	P	N	A	E	Y	M	I	H	Q	P	M	G	G	T	G	G	T	Q	T	D	M	A	I	A	A	E	H	L	L	K	T	R	N	T	L	E	K	152
NTDB	id	244	SPR	RS03300	WP	000613477.1	LAIVDTMNF	IKA	DVQ	TIV	MGMA	ASM	GT	VI	ASS	G	A	K	G	R	F	M	L	P	N	A	E	Y	M	I	H	Q	P	M	G	G	T	G	G	T	Q	T	D	M	A	I	A	A	E	H	L	L	K	T	R	N	T	L	E	K	152
NTDB	id	242	SP	RS03655	WP	000613477.1	LAIVDTMNF	IKA	DVQ	TIV	MGMA	ASM	GT	VI	ASS	G	A	K	G	R	F	M	L	P	N	A	E	Y	M	I	H	Q	P	M	G	G	T	G	G	T	Q	T	D	M	A	I	A	A	E	H	L	L	K	T	R	N	T	L	E	K	152
NTDB	id	446	SpyM6	JRS4	RS01695	WP	002985850.1	LAIVDTMNF	IKA	DVQ	TIV	MGMA	ASM	GT	VI	ASS	G	TG	KRF	ML	PNA	EY	M	I	H	Q	P	M	G	G	T	G	G	T	Q	T	D	M	A	I	A	A	E	H	L	L	K	T	R	H	R	L	E	K	152						
NTDB	id	445	SPYM3	RS01720	WP	002985850.1	LAIVDTMNF	IKA	DVQ	TIV	MGMA	ASM	GT	VI	ASS	G	TG	KRF	ML	PNA	EY	M	I	H	Q	P	M	G	G	T	G	G	T	Q	T	D	M	A	I	A	A	E	H	L	L	K	T	R	H	R	L	E	K	152							
NTDB	id	376	SMU	RS07595	WP	255262720.1	LAIVDTMNF	IKS	DVQ	TIV	VMG	TA	AS	MG	TI	ASS	G	A	K	G	R	F	M	L	P	N	A	E	Y	L	I	H	Q	P	M	G	G	T	G	G	T	Q	Q	S																	

NTDB id	602 KW2 RS03060 WP 011834647.1	ILADNSNRSL E QTHKDAERDHWMDAKETLEYGFIDEIMENNSLK.	199
NTDB id	611 V4T04 RS07970 WP 003129593.1	ILADNSNRSL E QTHKDAERDHWMDAKETLEYGFIDEIMENNSLK.	199
NTDB id	312319 D1036 RS01835 WP 002949732.1	ILADNSGQPTEKVHVDAERDNWMSAQETLEYGFIDEIMTNQLK.	196
NTDB id	330 STU RS11365 WP 002949732.1	ILADNSGQPTEKVHVDAERDNWMSAQETLEYGFIDEIMTNQLK.	196
NTDB id	298 STER RS01925 WP 002949732.1	ILADNSGQPTEKVHVDAERDNWMSAQETLEYGFIDEIMTNQLK.	196
NTDB id	282 KZH43 RS03215 WP 000613477.1	ILAENS G SMEKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.	196
NTDB id	246 SPD RS03495 WP 000613477.1	ILAENS G SMEKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.	196
NTDB id	244 SPR RS03300 WP 000613477.1	ILAENS G SMEKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.	196
NTDB id	242 SP RS03655 WP 000613477.1	ILAENS G SMEKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.	196
NTDB id	446 SpyM6JRS4 RS01695 WP 002985850.1	ILAAQNAGKTIKQTHKDAERDYWMSAEETLAYGFIDEIMENNELK.	196
NTDB id	445 SPYM3 RS01720 WP 002985850.1	ILAAQNAGKTIKQTHKDAERDYWMSAEETLAYGFIDEIMENNELK.	196
NTDB id	376 SMU RS07595 WP 255262720.1	ILSDNSGKTIKQTHKDAERDYWMDAKETLKYGFIDEIMENNELK.	204
NTDB id	86 BSU 34540 NP 391334.1	VLAERTTGQPLEVIERDTDRDNFKSAEEALEYGLIDKILTHTEDKK	197
NTDB id	1223 Cj0192c YP 002343650.1	ILAKNITKQKVAKIAKDTERDFFMSAQAKEYGLIDKVLKSFK..	194
consensus		*!*****!!*****!*!!!!!!*!!!!!!*!!!!!!*!!!!!!*	

 non conserved
 similar
 $\geq 50\%$ conserved