

NTDB id	602 KW2 RS03060 WP 011834647.1	MGYL	VPTVIEQSSRGERAYDIYSRLKLDRIIMLTGTPVEDGMANS	IAQLFLDAQDNTKDIYLYVNTPGGSVSAG	75
NTDB id	611 V4T04 RS07970 WP 003129593.1	MGYL	VPTVIEQSSRGERAYDIYSRLKLDRIIMLTGTPVEDGMANS	IAQLFLDAQDNTKDIYLYVNTPGGSVSAG	75
NTDB id	336656 EQH45 RS03625 WP 000613477.1	MIP	VVEIQTSGRSYDIYSRLKLDRIIMLTGTPVEDNMANS	VIAQLFLDAQDS TKDIYLYVNTPGGSVSAG	72
NTDB id	282 KZH43 RS03215 WP 000613477.1	MIP	VVEIQTSGRSYDIYSRLKLDRIIMLTGTPVEDNMANS	VIAQLFLDAQDS TKDIYLYVNTPGGSVSAG	72
NTDB id	246 SPD RS03495 WP 000613477.1	MIP	VVEIQTSGRSYDIYSRLKLDRIIMLTGTPVEDNMANS	VIAQLFLDAQDS TKDIYLYVNTPGGSVSAG	72
NTDB id	244 SPR RS03300 WP 000613477.1	MIP	VVEIQTSGRSYDIYSRLKLDRIIMLTGTPVEDNMANS	VIAQLFLDAQDS TKDIYLYVNTPGGSVSAG	72
NTDB id	242 SP RS03655 WP 000613477.1	MIP	VVEIQTSGRSYDIYSRLKLDRIIMLTGTPVEDNMANS	VIAQLFLDAQDS TKDIYLYVNTPGGSVSAG	72
NTDB id	330 STU RS11365 WP 002949732.1	MIP	VVEIQTSGRSYDIYSRLKLDRIIMLTGP IEDNMANS	IAQLFLDAQDN TKDIYLYVNTPGGSVSAG	72
NTDB id	298 STER RS01925 WP 002949732.1	MIP	VVEIQTSGRSYDIYSRLKLDRIIMLTGP IEDNMANS	IAQLFLDAQDN TKDIYLYVNTPGGSVSAG	72
NTDB id	446 SpyM6JRS4 RS01695 WP 002985850.1	MIP	VVEIQTSGRSYDIYSRLKLDRIIMLTGTPVEDNMANS	VIAQLFLDAQDN TKDIYLYVNTPGGSVSAG	72
NTDB id	445 SPYM3 RS01720 WP 002985850.1	MIP	VVEIQTSGRSYDIYSRLKLDRIIMLTGTPVEDNMANS	VIAQLFLDAQDN TKDIYLYVNTPGGSVSAG	72
NTDB id	376 SMU RS07595 WP 255262720.1	MELKEKYSL	FIPVVEIQTSGRSYDIYSRLKLDRIIMLTGTPVEDNMANS	IAQLFLDAQDN TKDIYLY INSPGGSVSAG	80
NTDB id	86 BSU 34540 NP 391334.1	MNLI	PVTVIEQTNRGERAYDIYSRLKLDRIIML GSA IDNVANS	IVSQLLFLAA EDPEKEISLY INSPGGS ITAG	74
NTDB id	1223 Cj0192c YP 002343650.1	MFIP	YVIEKSSRGRSYDIYSRLKLDRIIMLS GEIHDELAAAS	IVAQLLFLEA EDP TKDIYLY INSPGGV ITS	73
consensus					
*****!?!?!!??!!!!!!!*!!!!!!!!!!!!!!!!!!!!!!*!!!!!!*!!!!*!!!!*!!!!*!!!!*!!!!*!!!!*!!!!*!!!!*					

NTDB	id	602	KW2	RS03060	WP	011834647.1	LAIVDTMNF	IKS	DVQ	TIV	MGMA	ASMG	T	I	ASSG	T	KGK	R	F	M	L	P	N	A	E	Y	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	ASMG	T	I	ASSG	T	KGK	R	F	M	L	P	N	A	E	Y	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	336656	EQH45	RS03625	WP	000613477.1	LAIVDTMNF	IKA	DVQ	TIV	MGMA	ASMG	T	V	I	ASSG	A	K	G	K	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	R	N	T	L	E	K	152
NTDB	id	282	KZH43	RS03215	WP	000613477.1	LAIVDTMNF	IKS	DVQ	TIV	MGMA	ASMG	T	V	I	ASSG	A	K	G	K	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	R	N	T	L	E	K	152
NTDB	id	246	SPD	RS03495	WP	000613477.1	LAIVDTMNF	IKA	DVQ	TIV	MGMA	ASMG	T	V	I	ASSG	A	K	G	K	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	R	N	T	L	E	K	152
NTDB	id	244	SPR	RS03300	WP	000613477.1	LAIVDTMNF	IKA	DVQ	TIV	MGMA	ASMG	T	V	I	ASSG	A	K	G	K	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	R	N	T	L	E	K	152
NTDB	id	242	SP	RS03655	WP	000613477.1	LAIVDTMNF	IKA	DVQ	TIV	MGMA	ASMG	T	V	I	ASSG	A	K	G	K	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	R	N	T	L	E	K	152
NTDB	id	330	STU	RS11365	WP	002949732.1	LAIVDTMNF	IKS	DVQ	TIV	MGMA	ASMG	T	I	ASSG	T	KGK	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	R	N	N	L	E	Q	152			
NTDB	id	298	STER	RS01925	WP	002949732.1	LAIVDTMNF	IKS	DVQ	TIV	MGMA	ASMG	T	I	ASSG	T	KGK	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	R	N	N	L	E	Q	152			
NTDB	id	446	SpyM6	JRS4	RS01695	WP	002985850.1	LAIVDTMNF	IKA	DVQ	TIV	MGMA	ASMG	T	V	I	ASSG	T	KGK	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	R	H	R	L	E	K	152	
NTDB	id	445	SPYM3	RS01720	WP	002985850.1	LAIVDTMNF	IKA	DVQ	TIV	MGMA	ASMG	T	V	I	ASSG	T	KGK	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	R	H	R	L	E	K	152		
NTDB	id	376	SMU	RS07595	WP	255262720.1	LAIVDTMNF	IKS	DVQ	TIV	MG	T	A	ASMG	T																																														

NTDB id	602 KW2 RS03060 WP 011834647.1	ILADNSNRSLQIHKDAERDHWMDAKETLEYGFIDEIMENNSLK.	199
NTDB id	611 V4T04 RS07970 WP 003129593.1	ILADNSNRSLQIHKDAERDHWMDAKETLEYGFIDEIMENNSLK.	199
NTDB id	336656 EQH45 RS03625 WP 000613477.1	ILAENSQGSMKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.	196
NTDB id	282 KZH43 RS03215 WP 000613477.1	ILAENSQGSMKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.	196
NTDB id	246 SPD RS03495 WP 000613477.1	ILAENSQGSMKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.	196
NTDB id	244 SPR RS03300 WP 000613477.1	ILAENSQGSMKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.	196
NTDB id	242 SP RS03655 WP 000613477.1	ILAENSQGSMKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.	196
NTDB id	330 STU RS11365 WP 002949732.1	ILADNSGQPTEKVHVDAERDNWMSAQETLEYGFIDEIMTNQLK.	196
NTDB id	298 STER RS01925 WP 002949732.1	ILADNSGQPTEKVHVDAERDNWMSAQETLEYGFIDEIMTNQLK.	196
NTDB id	446 SpyM6JRS4 RS01695 WP 002985850.1	ILAAQNAGKTIKQIHKDAERDYWMSAEETLAYGFIDEIMENNELK.	196
NTDB id	445 SPYM3 RS01720 WP 002985850.1	ILAAQNAGKTIKQIHKDAERDYWMSAEETLAYGFIDEIMENNELK.	196
NTDB id	376 SMU RS07595 WP 255262720.1	ILSDNSGKTIKQIHKDAERDYWMDAKETLKYGFIDEIMENNELK.	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