

NTDB id	330 STU RS11365 WP 002949732.1		MIPVVIEQTSRGERSYDIYSRLLKDRIIMLTGPIEDNMANSIIAQLLFDAQDNTKDIYLYVNTPGGSVSAG	72
NTDB id	298 STER RS01925 WP 002949732.1		MIPVVIEQTSRGERSYDIYSRLLKDRIIMLTGPIEDNMANSIIAQLLFDAQDNTKDIYLYVNTPGGSVSAG	72
NTDB id	282 KZH43 RS03215 WP 000613477.1		MIPVVIEQTSRGERSYDIYSRLLKDRIIMLTGPVEDNMANSVIAQLLFDAQDS TKDIYLYVNTPGGSVSAG	72
NTDB id	246 SPD RS03495 WP 000613477.1		MIPVVIEQTSRGERSYDIYSRLLKDRIIMLTGPVEDNMANSVIAQLLFDAQDS TKDIYLYVNTPGGSVSAG	72
NTDB id	244 SPR RS03300 WP 000613477.1		MIPVVIEQTSRGERSYDIYSRLLKDRIIMLTGPVEDNMANSVIAQLLFDAQDS TKDIYLYVNTPGGSVSAG	72
NTDB id	242 SP RS03655 WP 000613477.1		MIPVVIEQTSRGERSYDIYSRLLKDRIIMLTGPVEDNMANSVIAQLLFDAQDS TKDIYLYVNTPGGSVSAG	72
NTDB id	602 KW2 RS03060 WP 011834647.1	MGYLVP	TIVIEQS SRGERAYDIYSRLLKDRIIMLTGPVEDGMANSIIAQLLFDAQDNTKDIYLYVNTPGGSVSAG	75
NTDB id	611 V4T04 RS07970 WP 003129593.1	MGYLVP	TIVIEQS SRGERAYDIYSRLLKDRIIMLTGPVEDGMANSIIAQLLFDAQDNTKDIYLYVNTPGGSVSAG	75
NTDB id	446 SpyM6JRS4 RS01695 WP 002985850.1		MIPVVIEQTSRGERSYDIYSRLLKDRIIMLTGPVEDNMANSVIAQLLFDAQDNTKDIYLYVNTPGGSVSAG	72
NTDB id	445 SPYM3 RS01720 WP 002985850.1		MIPVVIEQTSRGERSYDIYSRLLKDRIIMLTGPVEDNMANSVIAQLLFDAQDNTKDIYLYVNTPGGSVSAG	72
NTDB id	1128491 FQT45 RS07590 WP 003083781.1		MIPVVIEQTSRGERSYDIYSRLLKDRIIMLTGPVEDNMANSIIAQLLFDAQDNTKDIYLYVNTPGGSVSAG	72
NTDB id	376 SMU RS07595 WP 255262720.1	MELKEKYSL	MIPVVIEQTSRGERSYDIYSRLLKDRIIMLTGPVEDNMANSIIAQLLFDAQDNTKDIYLY INSPGGSVSAG	80
NTDB id	1223 Cj0192c YP 002343650.1	MFIP	VIEKSSRGERSYDIYSRLLKDRIIMLSGEIHDELAAASIVAQLLFLAEADPTKDIYLY INSPGGVITS	73
NTDB id	86 BSU 34540 NP 391334.1	MNL	IPTVIEQTN RGERAYDIYSRLLKDRIIMLGSAIDDNVANSI VSQLLFLAAE DPEKEISLY INSPGGSITAG	74
consensus			**!*!*****!!**!*!!!!!!!!!!!!!!!!!!!!!!!**!*!***!!*!****!*!*****!	

NTDB	id	330	STU RS11365 WP 002949732.1	LAIVDTMNFIKS	DVQTI VMGMAASMG	T IASSGT	TGKRFRMLPNAEYMIHQPMGGTGGGTQQTDMAIAAAEHLKTRNN	LEQ	152
NTDB	id	298	STER RS01925 WP 002949732.1	LAIVDTMNFIKS	DVQTI VMGMAASMG	T IASSGT	TGKRFRMLPNAEYMIHQPMGGTGGGTQQTDMAIAAAEHLKTRNN	LEQ	152
NTDB	id	282	KZH43 RS03215 WP 000613477.1	LAIVDTMNFIKA	DVQTI VMGMAASMG	V IASSG	A KGKRFRMLPNAEYMIHQPMGGTGGGTQQTDMAIAAAEHLKTRNT	LEK	152
NTDB	id	246	SPZ RS03495 WP 000613477.1	LAIVDTMNFIKS	DVQTI VMGMAASMG	V IASSG	A KGKRFRMLPNAEYMIHQPMGGTGGGTQQTDMAIAAAEHLKTRNT	LEK	152
NTDB	id	244	SPR RS03300 WP 000613477.1	LAIVDTMNFIKA	DVQTI VMGMAASMG	V IASSG	A KGKRFRMLPNAEYMIHQPMGGTGGGTQQTDMAIAAAEHLKTRNT	LEK	152
NTDB	id	242	SP RS03655 WP 000613477.1	LAIVDTMNFIKA	DVQTI VMGMAASMG	V IASSG	A KGKRFRMLPNAEYMIHQPMGGTGGGTQQTDMAIAAAEHLKTRNT	LEK	152
NTDB	id	602	KW2 RS03060 WP 011834647.1	LAIVDTMNFIKS	DVQTI VMGMAASMG	T IASSGT	TGKRFRMLPNAEYL I HQPMGGAG QGTQQTDMAI VAEQLLKTRKRLEQ	155	
NTDB	id	611	V4T04 RS07970 WP 003129593.1	LAIVDTMNFIKS	DVQTI VMGMAASMG	T IASSGT	TGKRFRMLPNAEYL I HQPMGGTG GTQQTDMAI VAEQLLKTRKRLEQ	155	
NTDB	id	446	SpyM6JRS4 RS01695 WP 002985850.1	LAIVDTMNFIKA	DVQTI VMGMAASMG	V IASSGT	A KGKRFRMLPNAEYMIHQPMGGTGGGTQQTDMAIAAAEHLKTRHRLEK	152	
NTDB	id	445	SPYM3 RS01720 WP 002985850.1	LAIVDTMNFIKA	DVQTI VMGMAASMG	V IASSGT	A KGKRFRMLPNAEYMIHQPMGGTGGGTQQTDMAIAAAEHLKTRHRLEK	152	
NTDB	id	1128491	FQT45 RS07590 WP 003083781.1	LAIVDTMNFIKS	DVQTI VMGMAASMG	T IASSGT	A KGKRFRMLPNAEYL I HQPMGGAG SGTQQTDMAI VAEQLLKTRKRLEK	152	
NTDB	id	376	SMU RS07595 WP 255262720.1	LAIVDTMNFIKS	DVQTI VMG T AASMG	T IASSG	A KGKRFRMLPNAEYL I HQPMGGTGGGTQQ S DMAIAAEQLLKTRKKLEK	160	
NTDB	id	1223	Cj0192c YP 002343650.1	FSIYDTMN Y IKP	DVCTICIGQAASMG	AFLLSCGAEGKRFRALPN SRIMIHQPLGGARG..	QATDIEIQAKE I L R L K T I LND	151	
NTDB	id	86	BSU 34540 NP 391334.1	MAYIDTMQFIKP	PKVSTICI GMAASMG	AFLLAAGEGKRFRALPN SEVMIHQPLGGAQG..	QATEIEIAAK R I L L L RDKL NK	152	
consensus				** * ! * ! * ! * ! *	* ! * ! * ! * ! * ! * ! * ! * ! *	* ! * ! * ! * ! * ! * ! * ! * ! *	* ! * ! * ! * ! * ! * ! * ! * ! *	* ! * ! * ! * ! * ! * ! * ! * ! *	* ! * ! * ! * ! * ! * ! * ! * ! *

NTDB id 330 STU RS11365 WP 002949732.1	ILADNSGQPIEKVHVDAERDNWMSAQETLEYGFIDEIMTNNQLK.	196
NTDB id 298 STER RS01925 WP 002949732.1	ILADNSGQPIEKVHVDAERDNWMSAQETLEYGFIDEIMTNNQLK.	196
NTDB id 282 KZH43 RS03215 WP 000613477.1	ILAENSGQSMEKVHADAERDNWMSAQETLEYGFIDEIMANNSLN.	196
NTDB id 246 SPD RS03495 WP 000613477.1	ILAENSGQSMEKVHADAERDNWMSAQETLEYGFIDEIMANNSLN.	196
NTDB id 244 SPR RS03300 WP 000613477.1	ILAENSGQSMEKVHADAERDNWMSAQETLEYGFIDEIMANNSLN.	196
NTDB id 242 SP RS03655 WP 000613477.1	ILAENSGQSMEKVHADAERDNWMSAQETLEYGFIDEIMANNSLN.	196
NTDB id 602 KW2 RS03060 WP 011834647.1	ILADNSNRSLQIHKDAERDHWMDAKETLEYGFIDEIMENNSLK.	199
NTDB id 611 V4T04 RS07970 WP 003129593.1	ILADNSNRSLQIHKDAERDHWMDAKETLEYGFIDEIMENNSLK.	199
NTDB id 446 SpyM6JRS4 RS01695 WP 002985850.1	ILAAQNAGKTIKQIHKAERDYWMSAEETLAYGFIDEIMENNELK.	196
NTDB id 445 SPYM3 RS01720 WP 002985850.1	ILAAQNAGKTIKQIHKAERDYWMSAEETLAYGFIDEIMENNELK.	196
NTDB id 1128491 FQT45 RS07590 WP 003083781.1	ILADNSGKTIKQIHKAERDYWMDAKETLEYGFIDEIMENNELK.	196
NTDB id 376 SMU RS07595 WP 255262720.1	ILSDNSGKTIKQIHKAERDYWMDAKETLKYGFIDEIMENNELK.	204
NTDB id 1223 Cj0192c YP 002343650.1	ILAKNTKQKVKAKIAKDTERDFFMSAQEAKHEYGLIDKVLKSFK..	194
NTDB id 86 BSU 34540 NP 391334.1	VLAERTGGPLEVIERDTDRDNFKSAEEALEYGLIDKILTHTEDKK	197
consensus	*!***** ** *!*!!!! *!!! !*****!!*!!** *	

 non conserved
 similar
 $\geq 50\%$ conserved