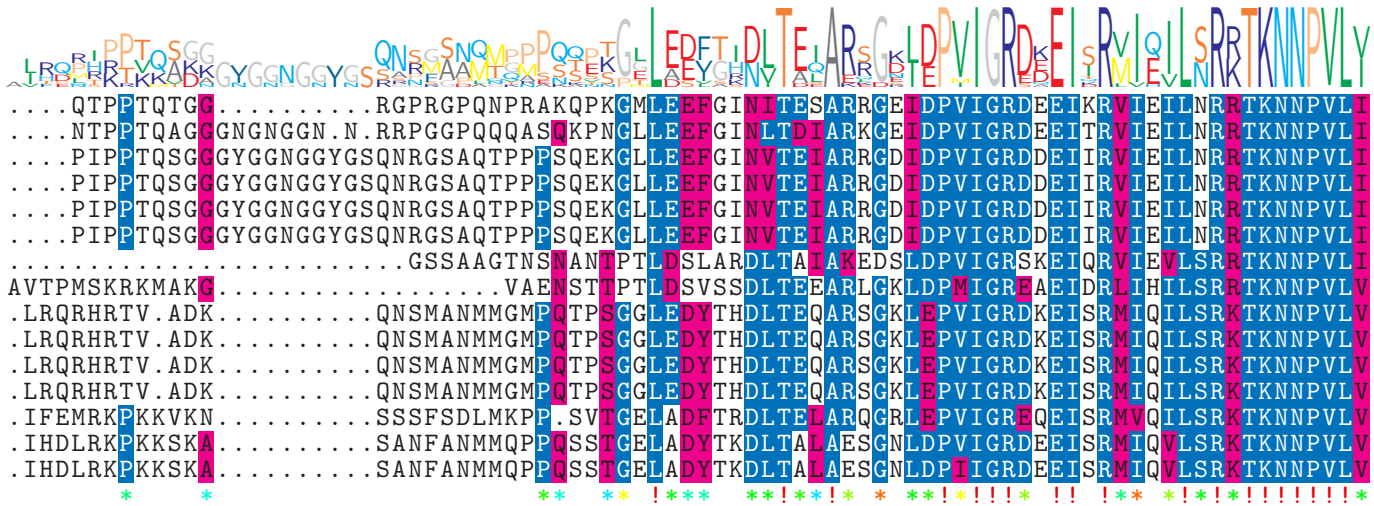


NTDB id 601 KW2 RS02615 WP 021036805.1	MLCQNCNINEA.....	TI	13
NTDB id 378 SMU RS02690 WP 002263569.1	MLCQNCNINEA.....	TI	13
NTDB id 281 KZH43 RS03550 WP 000882517.1	MLCQNCNINDS.....	TI	13
NTDB id 245 SPD RS03860 WP 000882517.1	MLCQNCNINDS.....	TI	13
NTDB id 243 SPR RS03635 WP 000882517.1	MLCQNCNINDS.....	TI	13
NTDB id 241 SP RS04015 WP 000882523.1	MLCQNCNINDS.....	TI	13
NTDB id 85 BSU 00860 NP 387967.1	..MMFGRFTTERAQKVLALAQEEALRLGHNNGTEHLLGLVREGEGTAAKALQALGLGSEKIQKEVESLI.....GRGQEMS		75
NTDB id 610 V4T04 RS10165 WP 012897346.1	MKFENIKYTPTLDRILEKAE EYAHQYQYGTIESAHLLAAMATTSGSLAYSLLAGMNVDSDDLII.....DLEDLSSHVKVKR		77
NTDB id 61274 R8615 RS10475 WP 061714020.1	MNYSKALNECIESAYMVAGHFGARYLESWHLLIAMSNHSYSVAGATLNDYPYEMDRLE.....EVALELTETDYSQDET	F	75
NTDB id 290 KZH43 RS10025 WP 001109677.1	MNYSKALNECIESAYMVAGHFGARYLESWHLLIAMSNHSYSVAGATLNDYPYEMDRLE.....EVALELTETDYSQDET	F	75
NTDB id 289 SPD RS10700 WP 001109677.1	MNYSKALNECIESAYMVAGHFGARYLESWHLLIAMSNHSYSVAGATLNDYPYEMDRLE.....EVALELTETDYSQDET	F	75
NTDB id 287 SP RS11210 WP 001109712.1	MNYSKALNECIESAYMVAGHFGARYLESWHLLIAMSNHSYSVAGATLNDYPYEMDRLE.....EVALELTETDYSQDET	F	75
NTDB id 377 SMU RS09275 WP 002262344.1	MTDYS LKMQEVFRLAQFEAARFESSYLESWHVLLAMVEIDSSVAGLSFAEFEADVRFEDYQAAAILAIGKKPKSSSN..DI	I	79
NTDB id 329 STER RS00545 WP 011680614.1	MTIYSRKMQAIFHRAQLEAERFESPFL ETWHVLLAMVEVTGSAVYLTFTDFEDRIHSEEIETA AVLAMEKRPKDLSEDI	I	81
NTDB id 327 STU RS10020 WP 011225298.1	MTIYSRKMQAIFHRAQLEAERFESPFL ETWHVLLAMVEVPGSAVYLTFTDFEDRIHSEEIETA AVLAMEKRPKDLSEDI	I	81
consensus	*** * * * * *		

NTDB	id	601	KW2	RS02615	WP	021036805.1	HL	Y	T	S	V	N	G	Q	K	K	Q	I	D	L	C	N	C	Y	Q	I	...	M	K	S	G	G	E	A	L	F	G	A	G	N	A	S	N	G	N	S	D	E	...	P	F	N	P	.	F	N	D	I	F	S	A	L	Q	G	Q	.	D	F	N	G	A	A	S	N	.	80																			
NTDB	id	378	SMU	RS02690	WP	002263569.1	H	L	Y	A	N	V	N	G	Q	K	K	Q	I	D	L	C	N	C	Y	Q	I	...	M	K	T	D	P	E	N	G	P	L	N	H	.	S	Q	N	S	S	...	I	N	P	F	F	D	.	D	F	F	G	D	.	L	N	N	F	R	A	F	N	N	Q	.	D	L	P	.	79																			
NTDB	id	281	KZH43	RS03550	WP	000882517.1	H	L	Y	T	N	L	N	G	K	K	K	Q	I	D	L	C	N	C	Y	K	I	...	I	K	T	D	P	N	N	S	L	F	K	G	M	T	D	L	N	N	R	D	...	F	D	P	.	F	G	D	F	F	N	D	.	L	N	N	F	R	P	S	S	N	..	T	P	.	76																				
NTDB	id	245	SPD	RS03860	WP	000882517.1	H	L	Y	T	N	L	N	G	K	K	K	Q	I	D	L	C	N	C	Y	K	I	...	I	K	T	D	P	N	N	S	L	F	K	G	M	T	D	L	N	N	R	D	...	F	D	P	.	F	G	D	F	F	N	D	.	L	N	N	F	R	P	S	S	N	..	T	P	.	76																				
NTDB	id	243	SPR	RS03635	WP	000882517.1	H	L	Y	T	N	L	N	G	K	K	K	Q	I	D	L	C	N	C	Y	K	I	...	I	K	T	D	P	N	N	S	L	F	K	G	M	T	D	L	N	N	R	D	...	F	D	P	.	F	G	D	F	F	N	D	.	L	N	N	F	R	P	S	S	N	..	T	P	.	76																				
NTDB	id	241	SP	RS04015	WP	000882523.1	H	L	Y	T	N	L	N	G	K	K	K	Q	I	D	L	C	N	C	Y	K	I	...	I	K	T	D	P	N	N	S	L	F	K	G	M	T	D	L	N	N	R	D	...	F	D	P	.	F	G	D	F	F	N	D	.	L	N	N	F	R	P	S	S	N	..	T	P	.	76																				
NTDB	id	85	BSU	O0860	NP	387967.1	Q	T	I	H	Y	T	P	R	A	K	K	V	I	E	L	S	M	D	E	A	R	K	L	G	H	S	Y	V	G	T	E	H	I	L	L	G	L	I	R	E	G	E	G	V	A	A	R	V	.	L	N	N	L	G	V	S	L	N	K	A	R	Q	Q	V	L	Q	L	...	L	G	S	N	E	T	...	147													
NTDB	id	610	V4T04	RS10165	WP	012897346.1	S	T	L	R	F	S	P	R	A	E	V	M	T	A	A	S	F	L	A	I	H	N	N	S	E	A	V	G	T	E	H	L	L	Y	A	L	L	Q	V	E	D	G	F	G	L	Q	L	L	K	L	...	Q	K	I	N	I	V	S	.	T	R	K	E	L	E	K	R	T	.	G	L	K	V	P	E	S	K	K	.	153									
NTDB	id	61274	R8615	RS10475	WP	061714020.1	T	E	L	P	F	S	R	R	L	Q	V	L	F	D	E	A	E	Y	V	A	S	.	V	H	A	K	V	L	G	T	E	H	V	L	Y	A	I	L	H	D	G	N	A	L	A	T	R	I	.	L	E	R	A	G	F	S	Y	E	D	K	K	D	Q	V	K	I	A	A	.	L	R	N	.	L	E	E	R	A	G	W	T	R	E	D	L	K	A	.	160
NTDB	id	290	KZH43	RS10025	WP	001109677.1	T	E	L	P	F	S	R	R	L	Q	I	L	F	D	E																																																																										

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NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
NTDB id 243 SPR RS03635 WP 000882517.1
NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 85 BSU 00860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
NTDB id 61274 R8615 RS10475 WP 061714020.1
NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
NTDB id 287 SP RS11210 WP 001109712.1
NTDB id 377 SMU RS09275 WP 002262344.1
NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus



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NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 378 SMU RS02690 WP 002263569.1
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NTDB id 61274 R8615 RS10475 WP 061714020.1
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NTDB id 289 SPD RS10700 WP 001109677.1
NTDB id 287 SP RS11210 WP 001109712.1
NTDB id 377 SMU RS09275 WP 002262344.1
NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus



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NTDB	id	601	KW2	RS02615	WP	021036805.1	GNMDAGN	ILK	PALARGE	L	Q	L	V	G	A	T	T	L	N	E	Y	R	.	I	E	K	D	A	A	L	E	R	R	M	Q	P	V	K	V	D	E	P	S	V	D	E	T	I	T	I	L	K	G	I	Q	A	R	Y	E	D	Y	H	H	V	K	Y	T	D	E	A	T	E	A	A	A	H	320													
NTDB	id	378	SMU	RS02690	WP	002263569.1	GNMDAGN	ILK	PALARGE	L	Q	L	V	G	A	T	T	L	N	E	Y	R	.	I	E	K	D	A	A	L	E	R	R	M	Q	P	V	K	V	D	E	P	S	V	A	E	T	I	T	I	L	K	G	I	Q	P	K	Y	E	D	Y	H	H	V	K	Y	T	D	E	A	T	E	A	A	A	N	327													
NTDB	id	281	KZH43	RS03550	WP	000882517.1	GNMDAGN	ILK	PALARGE	L	Q	L	V	G	A	T	T	L	N	E	Y	R	.	I	E	K	D	A	A	L	E	R	R	M	Q	P	V	K	V	D	E	P	T	V	D	E	T	I	T	I	L	K	G	I	Q	K	K	Y	E	D	Y	H	H	V	Q	Y	T	D	A	A	T	E	A	A	A	T	326													
NTDB	id	245	SPD	RS03860	WP	000882517.1	GNMDAGN	ILK	PALARGE	L	Q	L	V	G	A	T	T	L	N	E	Y	R	.	I	E	K	D	A	A	L	E	R	R	M	Q	P	V	K	V	D	E	P	T	V	D	E	T	I	T	I	L	K	G	I	Q	K	K	Y	E	D	Y	H	H	V	Q	Y	T	D	A	A	T	E	A	A	A	T	326													
NTDB	id	243	SPR	RS03635	WP	000882517.1	GNMDAGN	ILK	PALARGE	L	Q	L	V	G	A	T	T	L	N	E	Y	R	.	I	E	K	D	A	A	L	E	R	R	M	Q	P	V	K	V	D	E	P	T	V	D	E	T	I	T	I	L	K	G	I	Q	K	K	Y	E	D	Y	H	H	V	Q	Y	T	D	A	A	T	E	A	A	A	T	326													
NTDB	id	241	SP	RS04015	WP	000882523.1	GNMDAGN	ILK	PALARGE	L	Q	L	V	G	A	T	T	L	N	E	Y	R	.	I	E	K	D	A	A	L	E	R	R	M	Q	P	V	K	V	D	E	P	T	V	D	E	T	I	T	I	L	K	G	I	Q	K	K	Y	E	D	Y	H	H	V	Q	Y	T	D	A	A	T	E	A	A	A	T	326													
NTDB	id	85	BSU	00860	NP	387967.1	GA	I	D	A	S	N	I	L	K	P	S	L	A	R	G	E	L	Q	C	I	G	A	T	T	L	D	E	Y	R	K	Y	I	E	K	D	A	A	L	E	R	R	F	Q	P	I	Q	V	D	Q	P	S	V	D	E	S	I	Q	I	L	G	L	D	R	Y	E	A	H	R	V	S	I	T	D	D	A	T	E	A	A	V	K	376		
NTDB	id	610	V4T04	RS10165	WP	012897346.1	SV	N	D	A	A	N	I	L	K	P	A	L	A	R	G	D	F	Q	M	V	G	A	T	T	Y	H	E	Y	Q	K	Y	I	E	K	D	E	A	L	E	R	R	L	A	R	I	N	V	D	E	P	S	P	D	E	A	I	A	I	L	G	L	R	E	K	F	E	D	Y	H	Q	V	K	F	T	D	Q	A	I	K	S	A	V	M	390
NTDB	id	61274	R8615	RS10475	WP	061714020.1	ST	L	D	A	A	N	I	L	K	P	A	L	A	R	G	T	L	R	T	V	G	A	T	T	Q	E	E	Y	Q	K	H	I	E	K	D	A	A	L	S	R	R	F	A	K	V	T	I	E	P	S	V	A	D	S	M	T	I	L	G	L	K	A	T	Y	E	K	H	R	V	Q	I	T	D	E	A	V	E	T	A</					

[illegible]

NTDB id	601	KW2	RS02615	WP	021036805.1	EVTDEDMP	VITEKD	IEQI	VEQK	TQIPVGD	LKEKE	EQTQL	INLADD	DLKAHVIGQDEAVDK	ISKAIRRSRV	GLGKNRPIGSFLFVG	482
NTDB id	378	SMU	RS02690	WP	002263569.1	KLDKENTP	VITEKN	IEVI	VEQK	TNIPVGEL	LKEKE	EQSQL	IHLADD	DLKTRVIGQDAVDKI	AKAIRNRV	CLGTPNRPISFLFVG	489
NTDB id	281	KZH43	RS03550	WP	000882517.1	KITDQDTP	IISEKT	IEHI	IEQK	TNIPVGD	LKEKE	EQSQL	IHLAED	LKSHVIGQDDAVDK	IAKAIRNRV	CLGTPNRPISFLFVG	488
NTDB id	245	SPD	RS03860	WP	000882517.1	KITDQDTP	IISEKT	IEHI	IEQK	TNIPVGD	LKEKE	EQSQL	IHLAED	LKSHVIGQDDAVDK	IAKAIRNRV	CLGTPNRPISFLFVG	488
NTDB id	243	SPR	RS03635	WP	000882517.1	KITDQDTP	IISEKT	IEHI	IEQK	TNIPVGD	LKEKE	EQSQL	IHLAED	LKSHVIGQDDAVDK	IAKAIRNRV	CLGTPNRPISFLFVG	488
NTDB id	241	SP	RS04015	WP	000882523.1	KITDQDTPS	IISEKT	IEHI	IEQK	TNIPVGD	LKEKE	EQSQL	IHLAED	LKSHVIGQDDAVDK	IAKAIRNRV	CLGTPNRPISFLFVG	488
NTDB id	85	BSU	00860	NP	387967.1	EKGQGENSE	VTVDD	IAMV	VSSW	TGVPVSK	IAQTET	DKLLNMENI	LHSRVIGQDEAVVA	VAKAVRRARACLKDP	KRPIGSFILFG	546	
NTDB id	610	V4T04	RS10165	WP	012897346.1	SVKEDKRQE	VTDQA	VVAVASTL	TGVPIT	QMTKSES	ESDRLE	INLEKE	ELHKRVVGQEEAT	SASRAIRRARS	GVADSRPRMGFSM	FLGP	555
NTDB id	61274	R8615	RS10475	WP	061714020.1	EVPP.YKD	LMTESD	ILTTLSRL	SGIPVQKL	TQTD	AKKYLN	LEAE	LHKRVIGQDQAVSS	ISRAIRNQSGIRSHKRPIGSFM	FLGP	550	
NTDB id	290	KZH43	RS10025	WP	001109677.1	EVPP.YKD	LMTESD	ILTTLSRL	SGIPVQKL	TQTD	AKKYLN	LEAE	LHKRVIGQDQAVSS	ISRAIRNQSGIRSHKRPIGSFM	FLGP	550	
NTDB id	289	SPD	RS10700	WP	001109677.1	EVPP.YKD	LVTESD	ILTTLSRL	SGIPVQKL	TQTD	AKKYLN	LEAE	LHKRVIGQDQAVSS	ISRAIRNQSGIRSHKRPIGSFM	FLGP	550	
NTDB id	287	SP	RS11210	WP	001109712.1	EVPP.YKD	LVTESD	ILTTLSRL	SGIPVQKL	TQTD	AKKYLN	LEAE	LHKRVIGQDQAVSS	ISRAIRNQSGIRSHKRPIGSFM	FLGP	550	
NTDB id	377	SMU	RS09275	WP	002262344.1	KPLLKKRAE	VKVED	ILATLSKL	SGIPVKKL	TQADS	SKKYLN	NLER	ELHKRVIGQDDAVSS	ISRAIRNQSGIRVGGKRPIGSFM	FLGP	553	
NTDB id	297	STER	RS00545	WP	011680614.1	KAKFPKPA	LVDADQ	IMQTL	SRLSGIPVEKM	TQTS	SKRYLN	LESE	LHKRVIGQDEAVSA	ISRAIRNQSGIRTGKRPIGSFM	FLGP	556	
NTDB id	329	STU	RS10020	WP	011225298.1	KAKFPKPA	LVDADQ	IMQTL	SRLSGIPVEKM	TQTS	SKRYLN	LESE	LHKRVIGQDEAVSA	ISRAIRNQSGIRTGKRPIGSFM	FLGP	556	
consensus						*	*****	*	**	*****!	*	*	*****	*!* * *	*!*	*****!?!*	!* * *!?!*!?!*!?!*

NTDB id	601	KW2	RS02615	WP	021036805.1	TGVGKTELAKQLAKE	LFGSSSES	MIRFDMSEYMEKHVS	AKLIGAPPGYVGYEAGQ	LTERVRNRPYS	LILLDETEKAHPDVMHMF	567			
NTDB id	378	SMU	RS02690	WP	002263569.1	TGVGKTEL	SKQLAIELFGS	EDSMIRFDMSEYMEKHAV	AKLVGAPPGYVGYEAGQ	LTEKVRRNPYS	LILLDEVEKAHPDVMHMF	574			
NTDB id	281	KZH43	RS03550	WP	000882517.1	TGVGKTEL	SKQLAIELFGSADS	MIRFDMSEYMEKHVS	AKLVGAPPGYVGYDEAGQ	LTEKVRHNPPYS	LILLDEVEKAHPDVMHMF	573			
NTDB id	245	SPD	RS03860	WP	000882517.1	TGVGKTEL	SKQLAIELFGSADS	MIRFDMSEYMEKHVS	AKLVGAPPGYVGYDEAGQ	LTEKVRHNPPYS	LILLDEVEKAHPDVMHMF	573			
NTDB id	243	SPR	RS03635	WP	000882517.1	TGVGKTEL	SKQLAIELFGSADS	MIRFDMSEYMEKHVS	AKLVGAPPGYVGYDEAGQ	LTEKVRHNPPYS	LILLDEVEKAHPDVMHMF	573			
NTDB id	241	SP	RS04015	WP	000882523.1	TGVGKTEL	SKQLAIELFGSADS	MIRFDMSEYMEKHVS	AKLVGAPPGYVGYDEAGQ	LTEKVRHNPPYS	LILLDEVEKAHPDVMHMF	573			
NTDB id	85	BSU	00860	NP	387967.1	TGVGKTELARALAES	IFGD EES	MIRIDMSEYMEKHST	SRLVGSPPGYVGYDEGGQ	LTEKVRKPYSVLL	DETEKAHPDVFNILL	631			
NTDB id	610	V4T04	RS10165	WP	012897346.1	TGVGKTELAKALADS	VFGSEDNM	IRVDMSEFMekhst	SRLIGAPPGYVGYDEGGQ	LTERVRNKPYSVLL	DEVEKAHPDVFNIML	640			
NTDB id	61274	R8615	RS10475	WP	061714020.1	TGVGKTELAKALAEV	LFDD ESAL	IRFDMSEYMEKF AAS	SRLNGAPPYVGYEGGE	LTEKVRNKPYSVLL	DEVEKAHPDFNVLL	635			
NTDB id	290	KZH43	RS10025	WP	001109677.1	TGVGKTELAKALAEV	LFDD ESAL	IRFDMSEYMEKF AAS	SRLNGAPPYVGYEGGE	LTEKVRNKPYSVLL	DEVEKAHPDFNVLL	635			
NTDB id	289	SPD	RS10700	WP	001109677.1	TGVGKTELAKALAEV	LFDD ESAL	IRFDMSEYMEKF AAS	SRLNGAPPYVGYEGGE	LTEKVRNKPYSVLL	DEVEKAHPDFNVLL	635			
NTDB id	287	SP	RS11210	WP	001109712.1	TGVGKTELAKALAEV	LFDD ESAL	IRFDMSEYMEKF AAS	SRLNGAPPYVGYEGGE	LTEKVRNKPYSVLL	DEVEKAHPDFNVLL	635			
NTDB id	377	SMU	RS09275	WP	002262344.1	TGVGKTELAKALAEV	LFDD ESAL	IRFDMSEYMEKF AAS	SRLNGAPPYVGYEGGE	LTEKVRNKPYSVLL	DEVEKAHPDFNILL	638			
NTDB id	297	STER	RS00545	WP	011680614.1	TGVGKTELAKALAEV	LFDD ESALL	RFDMSEYMEKF AAS	SRLNGAPPYVGYEGGE	LTEKVRNKPYSVLL	DETEKAHPDFNILL	641			
NTDB id	329	STU	RS10020	WP	011225298.1	TGVGKTELAKALAEV	LFDD ESALL	RFDMSEYMEKF AAS	SRLNGAPPYVGYEGGE	LTEKVRNKPYSVLL	DETEKAHPDFNVLL	641			
consensus						!!!!!!*	* * *	*	***!*****!	**!	*!!!!!!!!*!*!	!!!!*!*	*!****!	!!*!!!!!!*!*!*!	641

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NTDB id 601 KW2 RS02615 WP 021036805.1	ISNQTQETAETTDDEEVPAE	748
NTDB id 378 SMU RS02690 WP 002263569.1	VIKASNK.VETVTKATSD.	753
NTDB id 281 KZH43 RS03550 WP 000882517.1	QIKSAKK.AEVKSSEKEK.	752
NTDB id 245 SPD RS03860 WP 000882517.1	QIKSAKK.AEVKSSEKEK.	752
NTDB id 243 SPR RS03635 WP 000882517.1	QIKSAKK.AEVKSSEKEK.	752
NTDB id 241 SP RS04015 WP 000882523.1	QIKSAKK.AEVKSSEKEK.	752
NTDB id 85 BSU 00860 NP 387967.1	VVKTTAKTN.....	810
NTDB id 610 V4T04 RS10165 WP 012897346.1	KIAQIV.....	816
NTDB id 61274 R8615 RS10475 WP 061714020.1	KFDIA.....	810
NTDB id 290 KZH43 RS10025 WP 001109677.1	KFDIA.....	810
NTDB id 289 SPD RS10700 WP 001109677.1	KFDIA.....	810
NTDB id 287 SP RS11210 WP 001109712.1	KFDIA.....	810
NTDB id 377 SMU RS09275 WP 002262344.1	KFDIV.....	813
NTDB id 297 STER RS00545 WP 011680614.1	TFTVV.....	816
NTDB id 329 STU RS10020 WP 011225298.1	TFTVV.....	816
consensus		



-  non conserved
-  similar
-  ≥ 50% conserved