

Accession	Protein	Sequence	Position
NTDB id 1294	VP RS04495 WP 021449594.1	MKWILTCLVVF.....	13
NTDB id 1159	ABDM36 RS04765 WP 001166105.1	MQIKTKIVTLFSLCLPTLP.....	20
NTDB id 1150	A1552VC RS08580 WP 001166105.1	MQIKTKIVTLFSLCLPTLP.....	20
NTDB id 1382	A4U84 RS07375 WP 062924234.1	MKKLSRYTFSLLFG.LFS.....	17
NTDB id 1362	HI 1008 AAC22669.1	MKTLL.FTSVVLGCALVV.....	16
NTDB id 595	KW2 RS08725 WP 021037687.1	MEKILDKLKEYWKIMLLVVCALVAGGIFYIFTNSPKPAETLSVENLSSSS.S..TKSSV	55
NTDB id 493	SM12261 RS04300 WP 000387351.1	MEAIIEKIKEYKIIIVICTGLGLLVGGFFLLKPAPQTPVKETNLQAEVVA.V..SKDSV	55
NTDB id 263	KZH43 RS04195 WP 000387330.1	MEAIIEKIKEYKIIIVICTGLGLLVGGFFLLKPAPQTPVKETNLQAEVAA.V..SKDLV	55
NTDB id 222	SPD RS04535 WP 000387330.1	MEAIIEKIKEYKIIIVICTGLGLLVGGFFLLKPAPQTPVKETNLQAEVAA.V..SKDLV	55
NTDB id 188	SPR RS04295 WP 000387330.1	MEAIIEKIKEYKIIIVICTGLGLLVGGFFLLKPAPQTPVKETNLQAEVAA.V..SKDLV	55
NTDB id 153	SP RS04730 WP 000387344.1	MEAIIEKIKEYKIIIVICTGLGLLVGGFFLLKPAPQTPVKETNLQAEVAA.V..SKDSS	55
NTDB id 613	LCA RS05340 WP 231952379.1	MMWQDYWQRYRRFWVPCVLVLLGIIAGGFYWHQ.SQQKQKVTQNEQ.LLAT.....SAS	52
NTDB id 105	BSU 25590 NP 390437.1	MNLWLNQHKKAILAA.SAAVFTAI.....MIFLAT.G....KNK....EPVKQAV....PTE	43
NTDB id 36	MA RS08230 WP 001793467.1	MVLlyQFL....LRYKDFLTQWKLYIIS....AVVLLIMVLIGFIFWRQ.DDYTSRNFENKDNALKQSTSENSLS	66
NTDB id 20	SA RS08005 WP 001802022.1	MVLlyQFL....LRYKDFLTQWKLYIIS....AVVLLIMVLIGFIFWRQ.DDYTSRNFENKDTALKQSTSENNSLS	66
NTDB id 1069	ABD1 RS03060 WP 043960841.1	MQYSMR..FWKNK.....YFVLLIMLCLGVIS.....	24
NTDB id 1041	HON27 RS14740 WP 005124713.1	MQYSMR..FWKNK.....YFLLIMLCLGVIS.....	24
NTDB id 1014	ACIAD RS13855 WP 004924483.1	MSIRHFFT...F..FWAT.....LLTLFSM.....	20
NTDB id 1127	NGFG RS10560 WP 003703428.1	MSRGGATPYRFLLRHIVARCGL..LFATLKGKT..MKKMFVLFcm.....	42
NTDB id 1126	NGFG RS09375 WP 003703428.1	MSRGGATPYRFLLRHIVARCGL..LFATLKGKT..MKKMFVLFcm.....	42
NTDB id 1125	NGFG RS07215 WP 003703428.1	MSRGGATPYRFLLRHIVARCGL..LFATLKGKT..MKKMFVLFcm.....	42
NTDB id 1108	NGFG RS06525 WP 003703428.1	MSRGGATPYRFLLRHIVARCGL..LFATLKGKT..MKKMFVLFcm.....	42
NTDB id 35724	SDEL RS08480 WP 012857443.1	MLKFFMLF.....	8
NTDB id 1242	Cj0011c YP 002343483.1	MKKLFLF.....	8
consensus		* * * * *	

NTDB	id	1294	VP	RS04495	WP	021449594.1	.....	PL	.....	SLAA	19
NTDB	id	1159	ABDM36	RS04765	WP	001166105.1	.....	LL	.....	ANAE	26
NTDB	id	1150	A1552VC	RS08580	WP	001166105.1	.....	LL	.....	ANAE	26
NTDB	id	1382	A4U84	RS07375	WP	062924234.1	.....	AT	.....	TFAE	23
NTDB	id	1362	HI	1008	AAC22669.1		.....	SS	.....	SFAE	22
NTDB	id	595	KW2	RS08725	WP	021037687.1	SKF....NSSSSEKNKNEIMVDLKGAVAKPN	VYQISS.DERLVDLIRQAGGFTDQADQKSINLSAKLK	DEEVIYVPKVG	GE	130
NTDB	id	493	SM12261	RS04300	WP	000387351.1	SEKEVKKEEKEEPLEQDLITVDVKGAVKSPG	IYDLPV.GSRVNDAVQKAGGLTEQADSKSLNLAQKVS	DEALVYVPTKGE	134	134
NTDB	id	263	KZH43	RS04195	WP	000387330.1	SEKEVNKEEKEEPLEQDLITVDVKGAVKSPG	IYDLPV.GSRVNDAVQKAGGLTEQADSKSLNLAQKVS	DEALVYVPTKGE	134	134
NTDB	id	222	SPD	RS04535	WP	000387330.1	SEKEVNKEEKEEPLEQDLITVDVKGAVKSPG	IYDLPV.GSRVNDAVQKAGGLTEQADSKSLNLAQKVS	DEALVYVPTKGE	134	134
NTDB	id	188	SPR	RS04295	WP	000387330.1	SEKEVNKEEKEEPLEQDLITVDVKGAVKSPG	IYDLPV.GSRVNDAVQKAGGLTEQADSKSLNLAQKVS	DEALVYVPTKGE	134	134
NTDB	id	153	SP	RS04730	WP	000387344.1	TEKEVKKEEKEEPLEQDLITVDVKGAVKSPG	IYDLPV.GSRVNDAVQKAGGLTEQADSKSLNLAQKVS	DEALVYVPTKGE	134	134
NTDB	id	613	LCA	RS05340	WP	231952379.1	KTKPATKKTHQAATKKKGGFVDIKGAVVYPG	IYPITVSETRLFEVLKNAGGPTDAADTKRLNLAQKLT	DQLTIYIPKKGE	132	132
NTDB	id	105	BSU	25590	NP	390437.1	TENTVVKQEAANNDESNETIVIDIKGAVQHPG	VYEMRT.GDRVSAIEKAGGTSEQADEAQVNLAELQ	DGTVVYIPKKGE	122	122
NTDB	id	36	MW	RS08230	WP	001793467.1	KVEDVQVKDGDNSKNKGPVYVDVKGAVKHNP	VYKMTS.KDRVVDLLDKAQLL.EDADVSRINLSEKLT	DQKMIFIPHKCQ	144	144
NTDB	id	20	SA	RS08005	WP	001802022.1	KLEDVQVKDGDNSKNKGPVYVDVKGAVKHNP	VYKMTS.KDRVVDLLDKAQLL.DDADVSRINLSEKLT	DQKMIFIPHKCQ	144	144
NTDB	id	1069	ABD1	RS03060	WP	043960841.1	.....	PSV.....	CAQSF..DQNFQEWKVKQQMY	DQKLNIS.KSSH	57
NTDB	id	1041	HON27	RS14740	WP	005124713.1	.....	PSV.....	CAQSF..DQNFQEWKAKQQMY	DQKLNIT.KSSH	57
NTDB	id	1014	ACIAD	RS13855	WP	004924483.1	.....	QIV.....	FAQGF..DQYDAWKTQQKAH	DTRLNSS.ASHH	53
NTDB	id	1127	NGFG	RS10560	WP	003703428.1	.....	LF.....			44
NTDB	id	1126	NGFG	RS09375	WP	003703428.1	.....	LF.....			44
NTDB	id	1125	NGFG	RS07215	WP	003703428.1	.....	LF.....			44
NTDB	id	1108	NGFG	RS06525	WP	003703428.1	.....	LF.....			44
NTDB	id	35724	SDEL	RS08480	WP	012857443.1		LF.....			10
NTDB	id	1242	Cj0011c	YP	002343483.1			FA.....			10
consensus								*.....*	*.....*	*.....*	

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NTDB id 1294 VP RS04495 WP 021449594.1	D..TKA.....DKYEGIEITVNINTASAEELATMLKGIGEKKAQSI	VDYRTEHGPFKTA	71		
NTDB id 1159 ABDM36 RS04765 WP 001166105.1	ETAPAA.....QVEEGIVITVNINTASAEELATLLKGIGLKKAAQAI	VDYREANGPFTHI	80		
NTDB id 1150 A1552VC RS08580 WP 001166105.1	ETAPAA.....QVEEGIVITVNINTASAEELATLLKGIGLKKAAQAI	VDYREANGPFTHI	80		
NTDB id 1382 A4U84 RS07375 WP 062924234.1	EKVTTSTEHTP.....V.....VMQQ.VAATQKVNANV	VNINTATASEIQDKLVGIGAKKAQAI	VEYREKNGKFLNV	89	
NTDB id 1362 HI 1008 AAC22669.1	EKATXQTAQSV.....V.....TTQAEAQVAPAVVSDK	LNINTATASEIQKSLTGIGAKKA	EAI	VQYREKHGNGFXNA	89
NTDB id 595 KW2 RS08725 WP 021037687.1	SSSSESTDSP.....GSSVSNQISTTSGPKVNINKAD	LITELQK.LTGIGQKKAQDI	IDFRMKN	GDFKSI	194
NTDB id 493 SM12261 RS04300 WP 000387351.1	EAASQQAGPGT.....AS.....STSKEKKV	NLNKASLEELKQ.VKGLGGKRAQDI	IDHREANGKFKSV	192	
NTDB id 263 KZH43 RS04195 WP 000387330.1	EAVSQQTGLGT.....AS.....SISKEKKV	NLNKASLEELKQ.VKGLGGKRAQDI	IDHREANGKFKSV	192	
NTDB id 222 SPD RS04535 WP 000387330.1	EAVSQQTGLGT.....AS.....SISKEKKV	NLNKASLEELKQ.VKGLGGKRAQDI	IDHREANGKFKSV	192	
NTDB id 188 SPR RS04295 WP 000387330.1	EAVSQQTGLGT.....AS.....SISKEKKV	NLNKASLEELKQ.VKGLGGKRAQDI	IDHREANGKFKSV	192	
NTDB id 153 SP RS04730 WP 000387344.1	EAVSQQTGSGT.....AS.....STSKEKKV	NLNKASLEELKQ.VKGLGGKRAQDI	IDHREANGKFKSV	192	
NTDB id 613 LCA RS05340 WP 231952379.1	VVTDQELIQAPQIATTSERTQECASTGTSANASSTSDTAK	IDLNQADSTQLQT.LNGIGPKKAEQI	IAYRDEQ	GKFKQI	211
NTDB id 105 BSU 25590 NP 390437.1	ETAVQGG.....GGSVQSD..GGKGAL	VNINTATLEELQG.ISGVGPSKAEAI	IAYREENG	GRFQTI	181
NTDB id 36 MW RS08230 WP 001793467.1	KNVEPQIG.....VNSVHVKNGTNTNTKVNLTASV	SELMS.VPGVGQAKANAIVEYRNQ	QGA	FQEI	205
NTDB id 20 SA RS08005 WP 001802022.1	KNVEPQIE.....VNSVHVKNGTNTNTKVNLTASV	SELMS.VPGVGQAKANAIVEYRNQ	QGA	FQEI	205
NTDB id 1069 ABD1 RS03060 WP 043960841.1	SNS.....SKISQTKNFNDSTGQ	IHLNQANVNEFQQ.LKGIGEKKAQAI	VEYRQKNGS	FKNI	113
NTDB id 1041 HON27 RS14740 WP 005124713.1	SNG.....SKISQTKNFNDSTGQ	IHLNQANVNEFQQ.LKGIGEKKAQAI	VEYRQKNGS	FKNI	113
NTDB id 1014 ACIAD RS13855 WP 004924483.1	SLS.....KPTQ....QSGTG	VKNINSATAKELQQ.LHGVGEKKALAI	VEYRQQY	GKFASV	105
NTDB id 1127 NGFG RS10560 WP 003703428.1	S....CAFSLAAVNINAASQQE	LEA.LPGIGPAKAKAIAEYRAQNG	AFKSV	90	
NTDB id 1126 NGFG RS09375 WP 003703428.1	S....CAFSLAAVNINAASQQE	LEA.LPGIGPAKAKAIAEYRAQNG	AFKSV	90	
NTDB id 1125 NGFG RS07215 WP 003703428.1	S....CAFSLAAVNINAASQQE	LEA.LPGIGPAKAKAIAEYRAQNG	AFKSV	90	
NTDB id 1108 NGFG RS06525 WP 003703428.1	S....CAFSLAAVNINAASQQE	LEA.LPGIGPAKAKAIAEYRAQNG	AFKSV	90	
NTDB id 35724 SDEL RS08480 WP 012857443.1	L....VASLWAKVDINSASLS	SELSS.LRGIGEKKAQAI	VEYRTQK	GKFNTI	56
NTDB id 1242 Cj0011c YP 002343483.1	L....TAFLFGAVNINTATL	KELKS.LNGIGEA	KAKAILEYRKE	.ANFTSI	55
consensus	***! !** ** * !** **!*!!**!!**!! ** !***				

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NTDB id 1294 VP RS04495 WP 021449594.1	ADLTNVKVGIGEAATIKKNEDRI	LL	94					
NTDB id 1159 ABDM36 RS04765 WP 001166105.1	DDLTLNVKVGIGEAATVRNNAAR	ILL	103					
NTDB id 1150 A1552VC RS08580 WP 001166105.1	DDLTLNVKVGIGEAATVRNNAAR	ILL	103					
NTDB id 1382 A4U84 RS07375 WP 062924234.1	EQLTEVSGIGKATLEKNRDC	IVIE	113					
NTDB id 1362 HI 1008 AAC22669.1	EQLLEVQGIGKATLEKNRDR	IIF	112					
NTDB id 595 KW2 RS08725 WP 021037687.1	EDLGKVS	GFGDKTLEKLD	EISID	218				
NTDB id 493 SM12261 RS04300 WP 000387351.1	DELKKVS	GIGAKTIEKLKDY	VTVD	216				
NTDB id 263 KZH43 RS04195 WP 000387330.1	DELKKVS	GIGGKTIEKLKDY	VTVD	216				
NTDB id 222 SPD RS04535 WP 000387330.1	DELKKVS	GIGGKTIEKLKDY	VTVD	216				
NTDB id 188 SPR RS04295 WP 000387330.1	DELKKVS	GIGGKTIEKLKDY	VTVD	216				
NTDB id 153 SP RS04730 WP 000387344.1	DELKKVS	GIGGKTIEKLKDY	VTVD	216				
NTDB id 613 LCA RS05340 WP 231952379.1	EDLQKV	GIGIPKTFEQLQSQ	ICVN	235				
NTDB id 105 BSU 25590 NP 390437.1	EDITKV	SIGIGEKSF	EIKSSITVK	205				
NTDB id 36 MW RS08230 WP 001793467.1	DDLKKV	KGFGSKTFDKLKS	YFTI	228				
NTDB id 20 SA RS08005 WP 001802022.1	DDLKKV	KGFGSKTFDKLKS	YFTI	228				
NTDB id 1069 ABD1 RS03060 WP 043960841.1	DEIKNV	KVGIGPAIF	EKNKSRLAL	136				
NTDB id 1041 HON27 RS14740 WP 005124713.1	DEIKNV	KVGIGPAIF	EKNKSRLAL	136				
NTDB id 1014 ACIAD RS13855 WP 004924483.1	DDLQKV	KGIGPKFIEKNR	DR	LAI	128			
NTDB id 1127 NGFG RS10560 WP 003703428.1	DDLIKV	KVGIGPAVLAKLKDQASV	GAPAPKGP	PAKPVLP	PAVKK	131		
NTDB id 1126 NGFG RS09375 WP 003703428.1	DDLIKV	KVGIGPAVLAKLKDQASV	GAPAPKGP	PAKPVLP	PAVKK	131		
NTDB id 1125 NGFG RS07215 WP 003703428.1	DDLIKV	KVGIGPAVLAKLKDQASV	GAPAPKGP	PAKPVLP	PAVKK	131		
NTDB id 1108 NGFG RS06525 WP 003703428.1	DDLIKV	KVGIGPAVLAKLKDQASV	GAPAPKGP	PAKPVLP	PAVKK	131		
NTDB id 35724 SDEL RS08480 WP 012857443.1	DELV	HVKGIGPKILES	IKSDIEVK	80				
NTDB id 1242 Cj0011c YP 002343483.1	DDLKKV	KVGIGDKLFEKIKND	ITIE	79				
consensus	***	*!*	!!*	!	****	!!**	!!**	!!

 non conserved
 similar
 $\geq 50\%$ conserved