

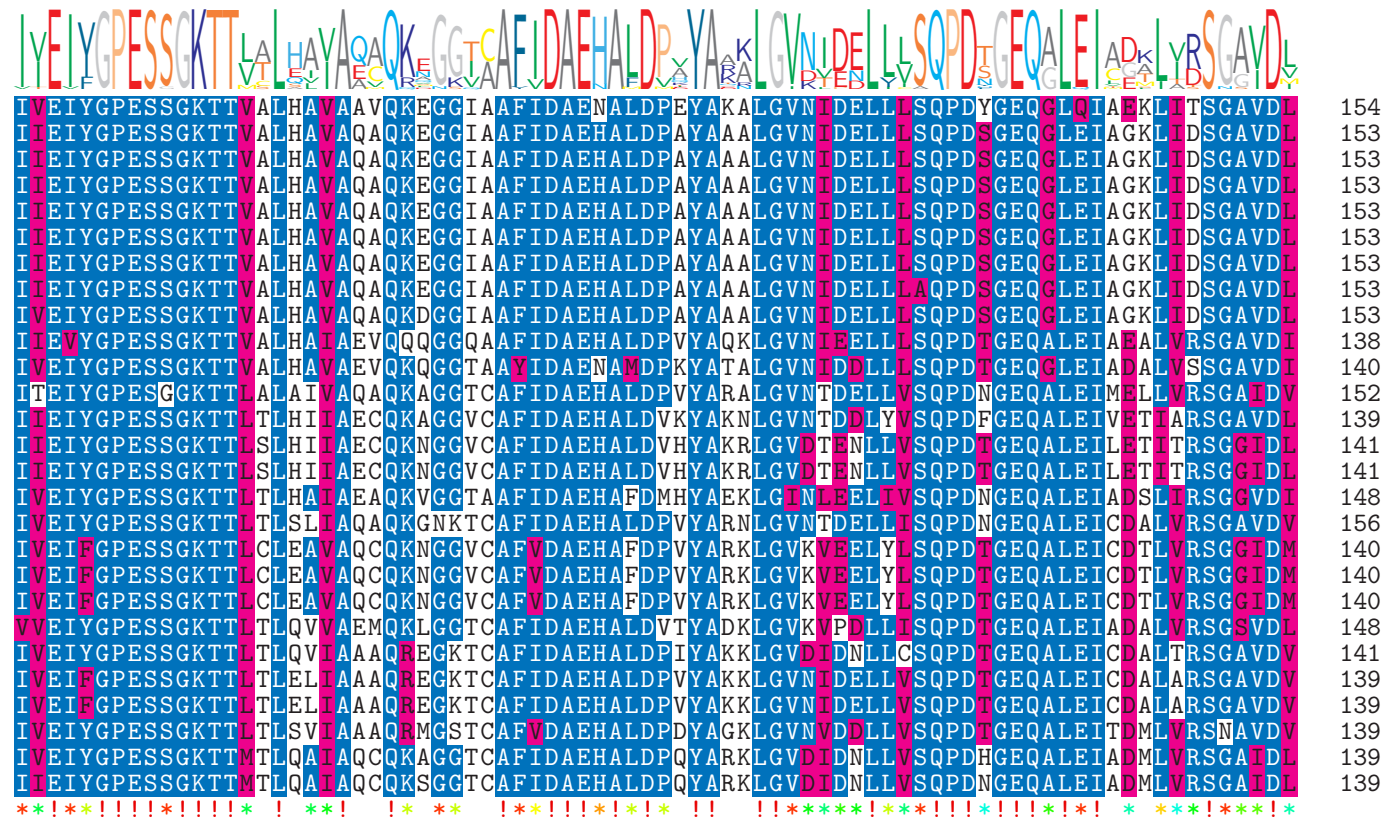
logo

NTDB id 600 KW2 RS01765 WP 011675413.1	MATKK.....KTNFDDITKKYGA	ERDKALADALALIEKD	FGKGSIMRLGEA	.ANQKVSV	VSSGSLALD	I	ALGAGGY	PKGR	74	
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAKK.....PKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 228 SPD RS09265 WP 001085462.1	.MAKK.....PKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 194 SPR RS08825 WP 001085462.1	.MAKK.....PKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 159 SP RS09750 WP 001085462.1	.MAKK.....PKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAKK.....PKKLDEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAKK.....PKKLDEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 453 Spy49 1753c ACI62003.1	.MAKK.....LKKNEEITKKFG	DERRKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQVM	SSGSLALD	I	ALGAGGY	PKGR	73	
NTDB id 408 SMU RS09530 WP 002262392.1	.MAKR.....IKKTEEITKKFG	DERKKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQVM	SSGSLALD	I	ALGAGGY	PKGR	73	
NTDB id 115 BSU 16940 NP 389576.2	MSDRQAALDMALK	QIEKQFGKGSIMKLGEK	.TDTRIST	VP	SGSLALD	T	ALGIGGY	PRGR	58	
NTDB id 625 LCA RS02525 WP 011374196.1	MAKDERQAALDA	ALKKIEKNFGKGSIMRMGEK	.VDTQVST	VSSGSLAL	DEALGV	GGYPRGR			60	
NTDB id 1313 DR RS12030 WP 010888966.1	MSKDATKEISAPTD	AKERSKATETAM	SQIEKAFGKGSIMKLGAE	.SKLDVQV	VSTGSLSLD	I	ALGVGGI	PRGR	72	
NTDB id 1245 Cj1673c YP 002345041.1	MDDNKRKSLDA	ALKSLDKTFGKGTILRLGDK	.EVEQIDS	IGTGSVGLD	I	ALGIGGV	PKGR		59	
NTDB id 1214 NCTC11637 00359 SQJ03206.1	MAIDEDKQKAI	SLAIKQIDKVF	FGKGALVRLGDK	.QVEKIDA	ISTGSLGLD	I	ALGIGGV	PKGR	61	
NTDB id 1211 C694 RS00795 WP 000963128.1	MAIDEDKQKAI	SLAIKQIDKVF	FGKGALVRLGDK	.QVEKIDS	ISTGSLGLD	I	ALGIGGV	PKGR	61	
NTDB id 1334 RAOC RS04870 WP 004918236.1	MAKT..ETTS	PNDDKKKALAAVLEK	LDKTYGKGTVMKLG	DGTVDH	NIEVIPS	GSGLGLD	I	ALGVGGY	PKGR	68
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKKSSKNNTV..VKQVEP	EQKKQALEAALA	QIEKQFGKGSIMKLGQT	.EQLDIES	VSTGSLGLD	I	ALGIGGL	PMGR	76	
NTDB id 1130 NGFG RS03960 WP 003688695.1	MSDDKSKALAAALA	QIEKSFGKGAIMKMDGS	QREENLEVISTGSLGLD	I	ALGVGGL	PRGR			60	
NTDB id 1124 NGFG RS03960 WP 003688695.1	MSDDKSKALAAALA	QIEKSFGKGAIMKMDGS	QREENLEVISTGSLGLD	I	ALGVGGL	PRGR			60	
NTDB id 1123 OK783 RS03845 WP 003688695.1	MSDDKSKALAAALA	QIEKSFGKGAIMKMDGS	QREENLEVISTGSLGLD	I	ALGVGGL	PRGR			60	
NTDB id 1427 RS RS02760 WP 011000510.1	.MEDG.....K..KAAS	MSAEKQKALAAALA	QIEKQFGKGSIMKMDA	.EVEPVQV	VSTGSLGLD	I	ALGVGGL	PRGR	68	
NTDB id 354814 E2566 RS16225 WP 010285348.1	MAIDENKQKALAAAL	GQIEKQFGKGSIMRLGED	.RSMDVET	ISTGSLSLD	I	ALGAGGL	PMGR		61	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	MDENKQKALAAAL	GQIEKQFGKGSIMRLGDN	.RAMDVET	ISTGSLSLD	I	ALGAGGL	PMGR		59	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	MDENKQKALAAAL	GQIEKQFGKGSIMRLGDN	.RAMDVET	ISTGSLSLD	I	ALGAGGL	PMGR		59	
NTDB id 1205 PSJM300 05545 AFN77183.1	MDENKKRALAAAL	GQIEKQFGKGAVMRMGD	H.DRQAIPS	ISTGSLGLD	I	ALGIGGL	PKGR		59	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	MDDNKSKALQAALS	QIEKQFGKNTVMRLGDN	.TVQAVEA	VSTGSLTLD	I	ALGIGGL	PKGR		59	
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consensus	***	***	*	***!	*!!*****	*	***!!*!!*!!*!!	!!	!!*!!	

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NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 115 BSU 16940 NP 389576.2
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
NTDB id 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 1427 RS RS02760 WP 011000510.1
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NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

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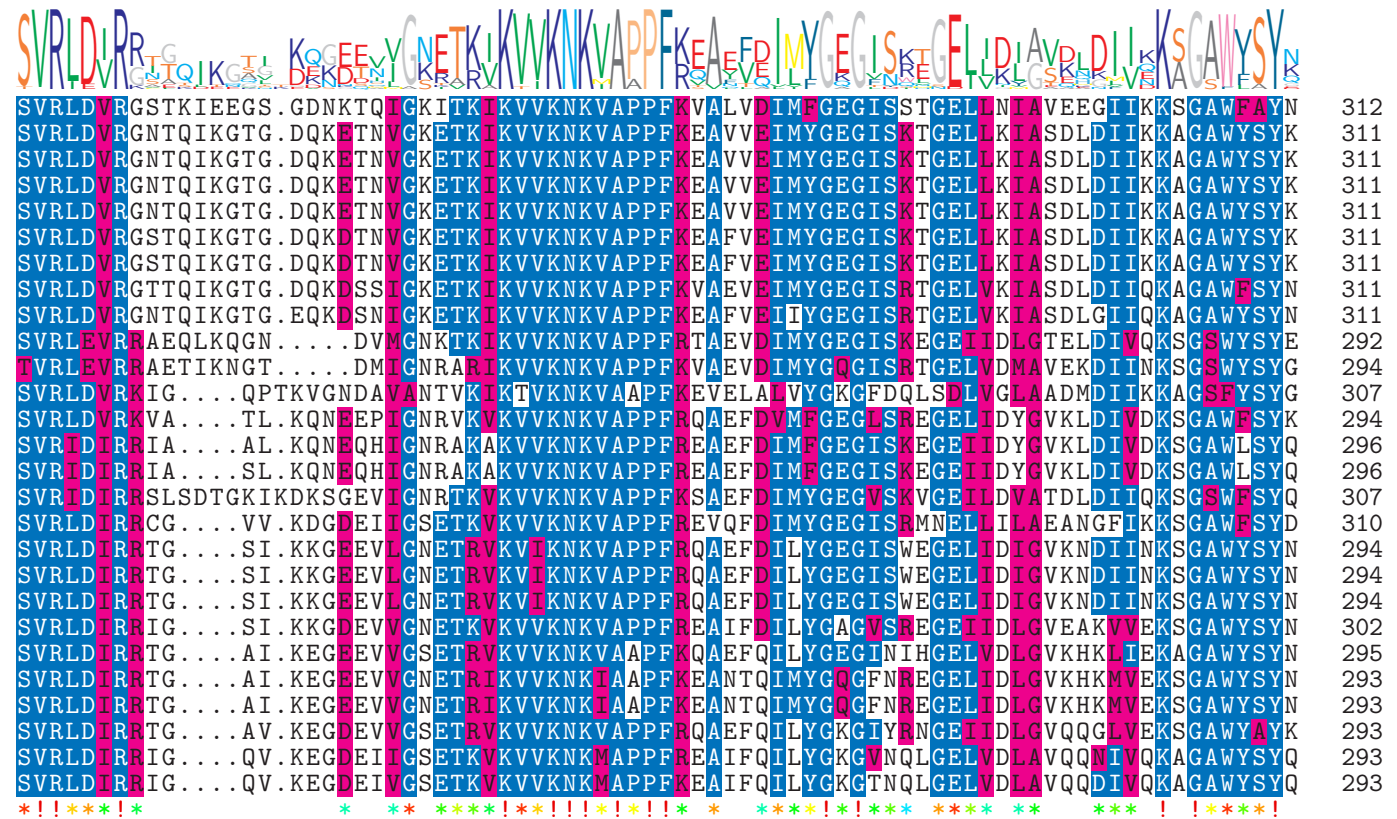


NTDB	id	600	KW2	RS01765	WP	011675413.1	VV	IDSVAALV	PKAEI	DGEI	GDSSVGLQAR	MMSQAMRKL	AGH	INKTKT	TA	IFINQLREK	VGVM	.FGSP	PETTP	GGRA	LKFYA	233			
NTDB	id	269	KZH43	RS08665	WP	001085462.1	VVV	DSVAALV	PRAEI	DGDI	GDSHVGLQAR	MMSQAMRKL	GAS	INKTKT	TA	IFINQLREK	VGVM	.FGNP	PETTP	GGRA	LKFYA	232			
NTDB	id	228	SPD	RS09265	WP	001085462.1	VVV	DSVAALV	PRAEI	DGDI	GDSHVGLQAR	MMSQAMRKL	GAS	INKTKT	TA	IFINQLREK	VGVM	.FGNP	PETTP	GGRA	LKFYA	232			
NTDB	id	194	SPR	RS08825	WP	001085462.1	VVV	DSVAALV	PRAEI	DGDI	GDSHVGLQAR	MMSQAMRKL	GAS	INKTKT	TA	IFINQLREK	VGVM	.FGNP	PETTP	GGRA	LKFYA	232			
NTDB	id	159	SP	RS09750	WP	001085462.1	VVV	DSVAALV	PRAEI	DGDI	GDSHVGLQAR	MMSQAMRKL	GAS	INKTKT	TA	IFINQLREK	VGVM	.FGNP	PETTP	GGRA	LKFYA	232			
NTDB	id	527	SMSK321	RS11065	WP	001085454.1	VVV	DSVAALV	PRAEI	DGDI	GDSHVGLQAR	MMSQAMRKL	GAS	INKTKT	TA	IFINQLREK	VGVM	.FGNP	PETTP	GGRA	LKFYA	232			
NTDB	id	499	SM12261	RS08315	WP	078228268.1	VVV	DSVAALV	PRAEI	DGDI	GDSHVGLQAR	MMSQAMRKL	GAS	INKTKT	TA	IFINQLREK	VGVM	.FGNP	PETTP	GGRA	LKFYA	232			
NTDB	id	453	Spy49	1753c	ACI62003.1	VVV	DSVAALV	PRAEI	DGDI	GDSHVGLQAR	MMSQAMRKL	SAS	INKTKT	TA	IFINQLREK	VGVM	.FGNP	PETTP	GGRA	LKFYA	232				
NTDB	id	408	SMU	RS09530	WP	002262392.1	VVV	DSVAALV	PRAEI	DGDI	GDSHVGLQAR	MMSQAMRKL	SAS	INKTKT	TA	IFINQLREK	VGIM	.FGNP	PETTP	GGRA	LKFYS	232			
NTDB	id	115	BSU	16940	NP	389576.2	VVV	DSVAALV	PKAEI	EGDM	GDSHVGLQAR	LSQALRKL	SAG	INKS	KTIA	IFINQIREK	VGVM	.FGNP	PETTP	GGRA	LKFYS	217			
NTDB	id	625	LCA	RS02525	WP	011374196.1	LV	DSVAALV	PRAEI	EGEM	GD	AHVGLQAR	LSQALRKL	SGT	INKTKT	TA	LFINQIREK	VGVM	.FGNPE	VTP	GGRA	LKFYS	219		
NTDB	id	1313	DR	RS12030	WP	010888966.1	VVV	DSVAAL	TPRAEI	EGDM	GD	SLPGLQAR	LSQALRKL	TA	ILSK	TGTAA	IFINQVREK	IGVM	.YGN	PETTT	GGRA	LKFYA	231		
NTDB	id	1245	Cj1673c	YP	002345041.1	IV	VDSVAAL	TPKAEI	EGDM	MGDQ	HVGLQAR	LSQALRKL	TG	IVHK	MNTTV	IFINQ	IRMKIGAM	GYGT	PETTT	TGGN	ALKFYA	219			
NTDB	id	1214	NCTC11637	00359	SQJ03206.1	VVV	DSVAAL	TPKAEI	DGDM	MGDQ	HVGLQAR	LSM	HALRK	ITGVL	LHKMNT	TL	IFINQ	IRMKIGM	MGY	GS	PETTT	TGGN	ALKFYA	221	
NTDB	id	1211	C694	RS00795	WP	000963128.1	VVV	DSVAAL	TPKAEI	DGDM	MGDQ	HVGLQAR	LSM	HALRK	ITGVL	LHKMNT	TL	IFINQ	IRMKIGM	MGY	GS	PETTT	TGGN	ALKFYA	221
NTDB	id	1334	RAOC	RS04870	WP	0004918236.1	VVV	DSVAAL	TPKAEI	DGDM	GD	SMGLHAR	LSQALRKL	TSS	IS	KTCTV	IFINQLRDK	IGVM	.FGSP	PETTT	TGGN	ALKFYA	227		
NTDB	id	1389	A4U84	RS07560	WP	021112712.1	II	VDSVAAL	TPKAEI	EGDM	GD	SHMGLQAR	LSQALRKL	TAN	IKNT	NC	LV	VFINQ	IRMKIGVM	.FGNP	PETTT	TGGN	ALKFYA	235	
NTDB	id	1130	NGFG	RS03960	WP	003688695.1	VVV	DSVAALV	PKAEI	EGDM	GD	SHVGLQAR	LSQALRKL	TG	HIK	TNTL	VV	VFINQ	IRMKIGVM	.FGSP	PETTT	TGGN	ALKFYS	219	
NTDB	id	1124	NGFG	RS03960	WP	003688695.1	VVV	DSVAALV	PKAEI	EGDM	GD	SHVGLQAR	LSQALRKL	TG	HIK	TNTL	VV	VFINQ	IRMKIGVM	.FGSP	PETTT	TGGN	ALKFYS	219	
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NTDB	id	1427	RS	RS02760	WP	011000510.1	IV	IDSVAALV	PKAEI	EGEM	GD	ALPGLQAR	LSQALRKL	TG	IKR	TNCL	VIFINQ	IRMKIGVM	.FGSP	PETTT	TGGN				

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NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
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NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 115 BSU 16940 NP 389576.2
NTDB id 625 LCA RS02525 WP 011374196.1
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NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 354814 E2566 RS16225 WP 010285348.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

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NTDB id 600 KW2 RS01765 WP 011675413.1	DEKIGQGA	EKAKNYLKEHQDV	DEIDHKVRAAHG	LDDSEVAETEEET	...	TASKTKAKAKKEEKAVETEEIELELED	..	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTEN	...	KKDE	PKKEEA..VNEEVPLDLGDEL	382
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTEN	...	KKDE	PKKEEA..VNEEVPLDLGDEL	382
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTEN	...	KKDE	PKKEEA..VNEEVPLDLGDEL	382
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTEN	...	KKDE	PKKEEA..VNEEVPLDLGDEL	382
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLADNPEVFAE	IDHQVRVQFGL	LIDGEEAAE	...	S...KKDE	VAQVDS..VNEEVTLDLGDEL	378
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLADNPEIF	DEIDHQVRVQFGL	LIDGEEIAE	...	S...KKDE	AAQVDS..VNEEVTLDLGDEL	378
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEEEESAMAVA	...	SE.....E.....	TDDLALDLNGI	374
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEEDNTEEKQSSK	...	EK.....ETDEK..	ADKNLVLELDDTI	379
NTDB id 115 BSU 16940 NP 389576.2	EERLGGG	RENAKQFLKENKDIM	LMIQEQIREHYGL	DNNGVVQQAEET	...	QEEL.EFE.E.....	.....	348
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQG	RENAKNYLADHEDVE	DEVRLKVRAAYG	ISDVPEEDLPTTED	...	E.QI.NILPDDST	EE.....	355
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQG	KEKTIAYIAERP	MEQEIRDRVMAAIR	AGNAGEAPALAPAPA	EAPEAAEA	.....	.....	363
NTDB id 1245 Cj1673c YP 002345041.1	DKKLGGG	RENSKAFLENPEIA	DEITKAIQNSMG	IEGMISGS	...	EDD..EGEE	.....	343
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKLGGG	RENAKALLKEDKAL	ADEITLKI	KESIGSNEEIMPL	...	PDE..PLEEME	.....	347
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKLGGG	RENAKALLKEDKAL	ADEITLKI	KESIGSNEEIMPL	...	PDE..PLEEME	.....	347
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKLGGG	RDITVKELIKDNPE	LAELEAKIREKLQAK	.....	.....	.....	.....	343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQG	KNNAVKWLKENPEI	ADKLEQEIRNTL	ASNPNSVLK	...	ATASDSNDESDVEEF	SEEEL.....	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEI	SDEIDAKIRALNG	VEMHITEG	...	T.....QDET	DGE.....RPEE.....	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEI	SDEIDAKIRALNG	VEMHITEG	...	T.....QDET	DGE.....RPEE.....	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEI	SDEIDAKIRALNG	VEMHITEG	...	T.....QDET	DGE.....RPEE.....	348
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQG	RDNCREFLRENAEL	AREIENKVVREHL	GVTMPGAVT	...	L.A.EEV	EED.....	352
NTDB id 354814 E2566 RS16225 WP 010285348.1	GDKIGQG	KANACNFLKENPAIA	AELDKKLREMLLHK	GNELTP	...	AAAGNSHDEDEFAGE	GNEEF.....	357
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQG	KANACKYFLKENPEI	AKTLDKKLREMLLN	PENMQLI	...	AETSSAAD	VEFG.A.....VPEEF.....	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQG	KANACKYFLKENPEI	AKTLDKKLREMLLN	PENMQLI	...	AETSSAAD	VEFG.A.....VPEEF.....	354
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQG	KANAAYLEENPEIG	EIEQQIRAKLL	VSANTKA	...	TPVAEDLADADI	.....	347
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQG	KNNVIRYLEENPQI	STEIEAVIREQLLT	KASDQTA	...	A.HDETE	EEPDLLES.....	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQG	KNNVIRYFEENNQIA	EIEIRNIREQLLT	TGTNGAV	...	Q.I.EDE	EEPDLLLE.....S.....	349
consensus	***!!!	*****	**	*****	*****	**	**	

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NTDB id 600 KW2 RS01765 WP 011675413.1							387
NTDB id 269 KZH43 RS08665 WP 001085462.1	EIEIEE						388
NTDB id 228 SPD RS09265 WP 001085462.1	EIEIEE						388
NTDB id 194 SPR RS08825 WP 001085462.1	EIEIEE						388
NTDB id 159 SP RS09750 WP 001085462.1	EIEIEE						388
NTDB id 527 SMSK321 RS11065 WP 001085454.1	EIEIEE						384
NTDB id 499 SM12261 RS08315 WP 078228268.1	EIEIEE						384
NTDB id 453 Spy49 1753c ACI62003.1	EIED..						378
NTDB id 408 SMU RS09530 WP 002262392.1	ELED..						383
NTDB id 115 BSU 16940 NP 389576.2							348
NTDB id 625 LCA RS02525 WP 011374196.1							355
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NTDB id 1245 Cj1673c YP 002345041.1							343
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NTDB id 1211 C694 RS00795 WP 000963128.1							347
NTDB id 1334 RAOC RS04870 WP 004918236.1							343
NTDB id 1389 A4U84 RS07560 WP 021112712.1							372
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NTDB id 1124 NGFG RS03960 WP 003688695.1							348
NTDB id 1123 OK783 RS03845 WP 003688695.1							348
NTDB id 1427 RS RS02760 WP 011000510.1	.....						352
NTDB id 354814 E2566 RS16225 WP 010285348.1	.....						357
NTDB id 1165 A1552VC RS01565 WP 000344154.1							354
NTDB id 1142 GTF74 RS11550 WP 000344154.1							354
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NTDB id 1022 ACIAD RS06390 WP 004925639.1							349
NTDB id 1074 ABD1 RS10195 WP 000344167.1							349
consensus							

-  non conserved
-  similar
-  ≥ 50% conserved