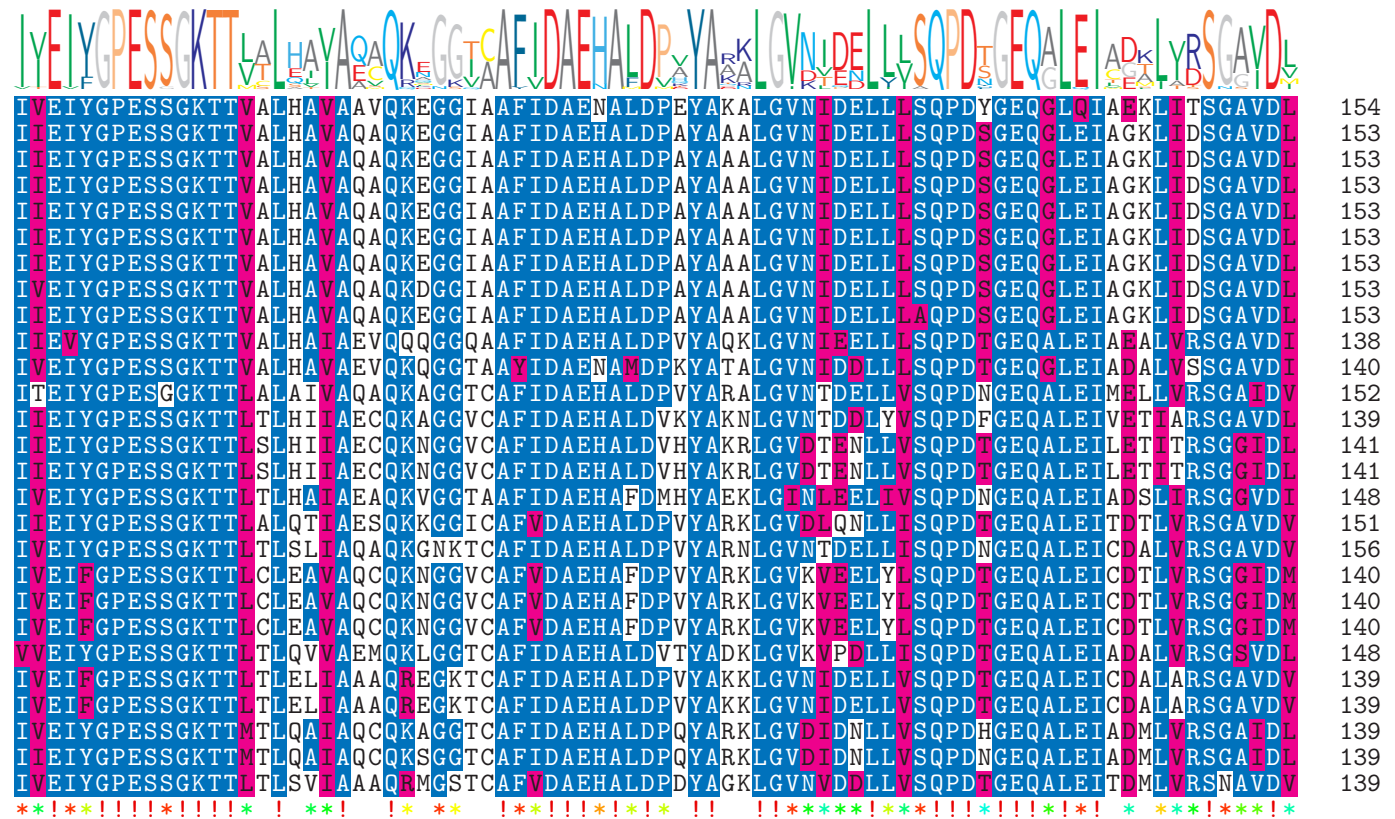


NTDB	id	600	KW2	RS01765	WP	011675413.1	MATKKKT....NFDDITKKYGA	ERDKALAD	ALAL	IEKDFGKGSIMRLGER	EA	ANQK	VSV	VSSGSLALD	IALGAGGYPKGR	74
NTDB	id	269	KZH43	RS08665	WP	001085462.1	.MAKKPK....KLEEISKKFGA	EREKALND	ALKL	IEKDFGKGSIMRLGER	AEQK	VQVM	MSSGSLALD	IALGSGGYPKGR	73	
NTDB	id	228	SPD	RS09265	WP	001085462.1	.MAKKPK....KLEEISKKFGA	EREKALND	ALKL	IEKDFGKGSIMRLGER	AEQK	VQVM	MSSGSLALD	IALGSGGYPKGR	73	
NTDB	id	194	SPR	RS08825	WP	001085462.1	.MAKKPK....KLEEISKKFGA	EREKALND	ALKL	IEKDFGKGSIMRLGER	AEQK	VQVM	MSSGSLALD	IALGSGGYPKGR	73	
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NTDB	id	527	SMSK321	RS11065	WP	001085454.1	.MAKKPK....KLDEISKKFGA	EREKALND	ALKL	IEKDFGKGSIMRLGER	AEQK	VQVM	MSSGSLALD	IALGSGGYPKGR	73	
NTDB	id	499	SM12261	RS08315	WP	078228268.1	.MAKKPK....KLDEISKKFGA	EREKALND	ALKL	IEKDFGKGSIMRLGER	AEQK	VQVM	MSSGSLALD	IALGSGGYPKGR	73	
NTDB	id	408	SMU	RS09530	WP	002262392.1	.MAKRIK....KTEEITKKFGD	ERKKALDD	ALKN	IEKDFGKGAVMRLGER	AEQK	VQVM	MSSGSLALD	IALGAGGYPKGR	73	
NTDB	id	453	Spy49	1753c	ACI62003.1		.MAKKLK....KNEEITKKFGD	ERRKALDD	ALKN	IEKDFGKGAVMRLGER	AEQK	VQVM	MSSGSLALD	IALGAGGYPKGR	73	
NTDB	id	115	BSU	16940	NP	389576.2	MSDRQAALDMALKQ	IEKQFGKGSIMKLGEK	TDTRIST	VPSSGSLALD	TALGIGGYPGR				58	
NTDB	id	625	LCA	RS02525	WP	011374196.1	MAKD	ERQAALDA	ALKK	IEKNFGKGSIMRMGEK	VDTRIST	VSTVSSGSLALD	ALGIVGGYPGR		60	
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NTDB	id	1214	NCTC11637	00359	SQJ03206.1		M..AIDE	DKQKATSLA	IKQIDKV	FGKGALVRLGDK	QVEK	IDA	ISTGSLGLD	LALGIGGVPKGR	61	
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NTDB	id	1389	A4U84	RS07560	WP	021112712.1	.MAENKKSSKNNTTVVKQ..VEPEQ	KKQALEA	ALAQIEKQ	FGKGSIMKLGQT	EQLD	IESV	VSTGSLGLD	LALGIGGYPKGR	76	
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NTDB	id	1165	A1552VC	RS01565	WP	000344154.1	MDEN	KQKALAA	ALGQIEKQ	FGKGSIMRLGDN	RAMD	VET	ISTGSLSLD	IALGAGGYPKGR	59	
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NTDB	id	1022	ACIAD	RS06390	WP	004925639.1	MDDN	KSALQA	ALSQIEKQ	FGKNTVMRLGDN	TVQAVEAV	VSTGSLTLD	IALGIGGYPKGR		59	
NTDB	id	1074	ABD1	RS10195	WP	000344167.1	MDEN	KSALQA	ALSQIEKQ	FGKNTVMRLGDN	TVQAVEAV	VSTGSLTLD	IALGIGGYPKGR		59	
NTDB	id	1205	PSJM300	05545	AFN77183.1		MDEN	KKRALAA	ALGQIEKQ	FGKGAVMRMGDH	DRQAIPS	ISTGSLGLD	IALGIGGYPK			

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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 499 SM12261 RS08315 WP 078228268.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
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 1211 C694 RS00795 WP 000963128.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 60879 REMIM1 RS11705 WP 011425583.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 1427 RS RS02760 WP 011000510.1
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NTDB id 1142 GTF74 RS11550 WP 000344154.1
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NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

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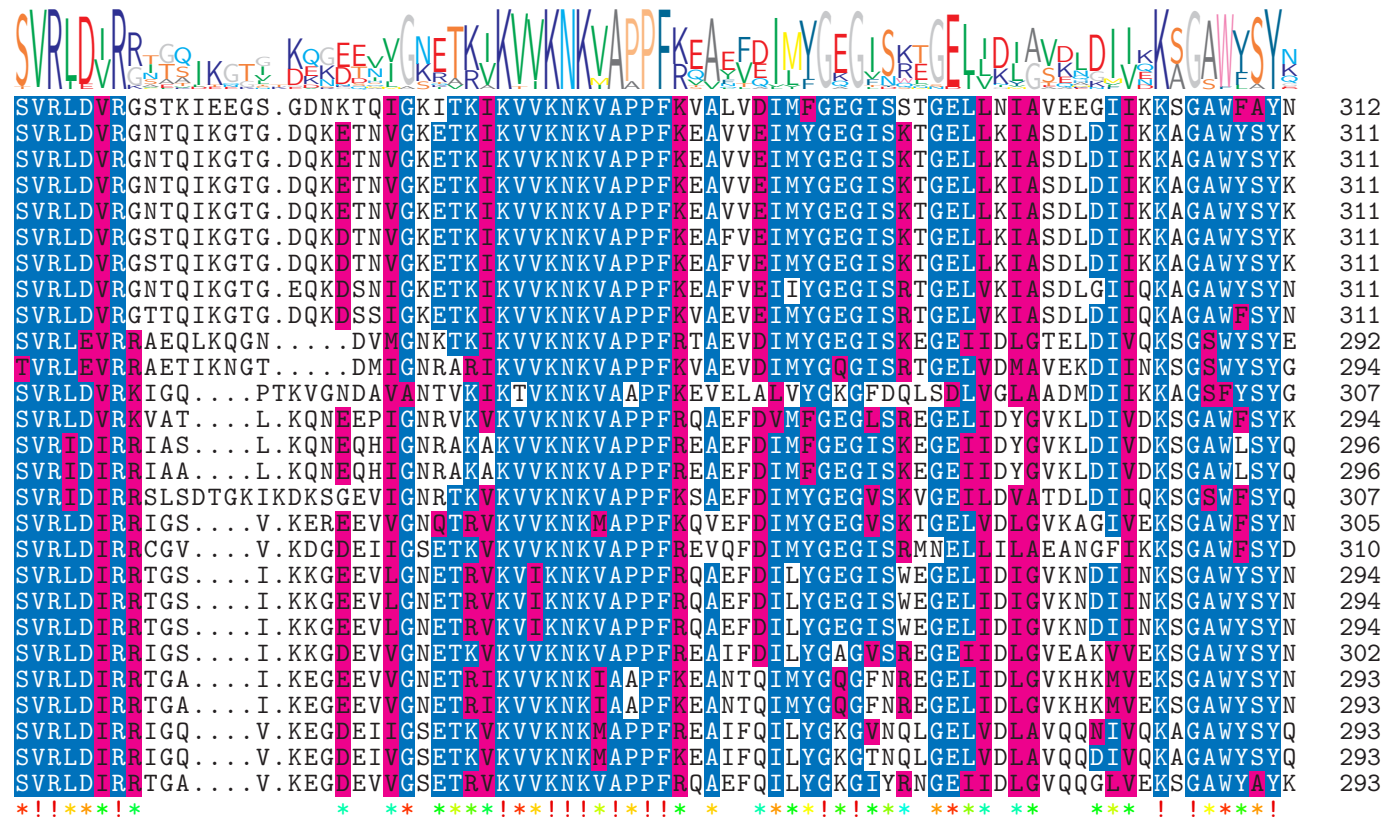


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NTDB	id	269	KZH43	RS08665	WP	001085462.1	VV	DSVAAL	VP	RA	EID	GD	SHVGLQAR	MSQAMRKL	GAS	INKTKT	TA	IFINQLREK	VGV	M	FGN	PETT	PGGR	ALKFYA	232											
NTDB	id	228	SPD	RS09265	WP	001085462.1	VV	DSVAAL	VP	RA	EID	GD	SHVGLQAR	MSQAMRKL	GAS	INKTKT	TA	IFINQLREK	VGV	M	FGN	PETT	PGGR	ALKFYA	232											
NTDB	id	194	SPR	RS08825	WP	001085462.1	VV	DSVAAL	VP	RA	EID	GD	SHVGLQAR	MSQAMRKL	GAS	INKTKT	TA	IFINQLREK	VGV	M	FGN	PETT	PGGR	ALKFYA	232											
NTDB	id	159	SP	RS09750	WP	001085462.1	VV	DSVAAL	VP	RA	EID	GD	SHVGLQAR	MSQAMRKL	GAS	INKTKT	TA	IFINQLREK	VGV	M	FGN	PETT	PGGR	ALKFYA	232											
NTDB	id	527	SMSK321	RS11065	WP	001085454.1	VV	DSVAAL	VP	RA	EID	GD	SHVGLQAR	MSQAMRKL	GAS	INKTKT	TA	IFINQLREK	VGV	M	FGN	PETT	PGGR	ALKFYA	232											
NTDB	id	499	SM12261	RS08315	WP	078228268.1	VV	DSVAAL	VP	RA	EID	GD	SHVGLQAR	MSQAMRKL	GAS	INKTKT	TA	IFINQLREK	VGV	M	FGN	PETT	PGGR	ALKFYA	232											
NTDB	id	408	SMU	RS09530	WP	002262392.1	VV	DSVAAL	VP	RA	EID	GD	SHVGLQAR	MSQAMRKL	SAS	INKTKT	TA	IFINQLREK	VGM	I	FGN	PETT	PGGR	ALKFY	S	232										
NTDB	id	453	Spy49	1753c	ACI	62003.1	VV	DSVAAL	VP	RA	EID	GD	SHVGLQAR	MSQAMRKL	SAS	INKTKT	TA	IFINQLREK	VGV	M	FGN	PETT	PGGR	ALKFYA	232											
NTDB	id	115	BSU	16940	NP	389576.2	VV	DSVAAL	VP	KA	EIE	GD	MGD	SHVGLQAR	LSQALRKLS	GA	INK	SKT	IA	IFINQ	IREK	VGV	M	FGN	PETT	PGGR	ALKFY	S	217							
NTDB	id	625	LCA	RS02525	WP	001374196.1	L	V	DSVAAL	VP	RA	EIE	G	EMGD	AHVGLQAR	LSQALRKLS	GT	INKTKT	IA	IFINQ	IREK	VGV	M	FGN	PEV	TP	GG	ALKFY	S	219						
NTDB	id	1313	DR	RS12030	WP	010888966.1	VV	DSVAAL	TP	RA	EIE	G	DMGDS	LPGLQAR	LSQALRKLT	AI	LSKT	GTA	AFINQ	VREK	I	GV	M	YGN	PETT	T	GG	ALKFYA	231							
NTDB	id	1245	Cj1673c	YP	002345041.1	I	V	DSVAAL	TP	KA	EIE	G	DMGD	QHVGLQAR	LSQALRKLT	G	IVHKMNT	TV	IFINQ	IRMK	I	GAMG	YGT	PETT	T	GG	N	ALKFYA	219							
NTDB	id	1211	C694	RS00795	WP	000963128.1	VV	DSVAAL	TP	KA	EID	G	DMGD	QHVGLQAR	LSHAI	LRKIT	G	VLHKMNT	TL	IFINQ	IRMK	I	GMMG	YGS	PETT	T	GG	N	ALKFYA	221						
NTDB	id	1214	NCTC11637	00359	SQJ	03206.1	VV	DSVAAL	TP	KA	EID	G	DMGD	QHVGLQAR	LSHAI	LRKIT	G	VLHKMNT	TL	IFINQ	IRMK	I	GMMG	YGS	PETT	T	GG	N	ALKFYA	221						
NTDB	id	1334	RAOC	RS04870	WP	004918236.1	VV	DSVAAL	TP	KA	EID	G	DMGDS	KPMGLHAR	LSQALRKLT	SS	ISKTKCT	V	IFINQL	RDK	I	GV	M	FGS	PETT	T	GG	N	ALKFYA	227						
NTDB	id	60879	REMEM1	RS11705	WP	011425583.1	L	V	DSVAAL	TP	RA	EIE	G	EMGDS	LP	GMQAR	LSQALRKLT	AS	ISK	S	N	CMV	IFINQ	IRMK	I	GV	M	FGS	PETT	T	GG	N	ALKFYA	230		
NTDB	id	1389	A4U84	RS07560	WP	021112712.1	I	I	V	DSVAAL	TP	KA	EIE	G	DMGDS	H	MGLQAR	LSQALRKLT	AN	IKNT	N	CL	V	V	FINQ	IRMK	I	GV	M	FGN	PETT	T	GG	N	ALKFYA	235
NTDB	id	1130	NGFG	RS03960	WP	003688695.1	VV	DSVAAL	VP	KA	EIE	G	DMGDS	SHVGLQAR	LSQALRKLT	G	H	IKKTNT	LV	V	FINQ	IRMK	I	GV	M											

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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
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NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
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 1211 C694 RS00795 WP 000963128.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
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NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

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NTDB id 600 KW2 RS01765 WP 011675413.1	DEKIGQGA	EKAKNYLKEHQDV	DEIDHKVRAAHG	LDDSEVAETEEETT	ASKTKAKAKKEEK	AVETEEIELELED		387
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	..VNEEVPLDLG	DELEIE	385
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	..VNEEVPLDLG	DELEIE	385
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	..VNEEVPLDLG	DELEIE	385
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	..VNEEVPLDLG	DELEIE	385
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLADNPEV	FAEIDHQVRVQFGL	IDGEEAAE....SKK	DE....VAQVDS	..VNEEVTLDL	GDELEIE	381
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLADNPEIF	DEIDHQVRVQFGL	IDGEEIAE....SKK	DE....AAQVDS	..VNEEVTLDL	GDELEIE	381
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVVRVQYGL	IEEDNTEEKQSSKE	ETDEK	..ADKNLVLELD	DDTIELE	382
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NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQG	RENAKNYLADHED	VEDEVRLKVRAA	YGISDVPEEDLPT	TEDE.QI.NILPDD	ST.....EE.....		355
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NTDB id 1245 Cj1673c YP 002345041.1	DKKLGGG	RENSKAFLENPEIA	DEITKAIQNSMG	IEGM.....ISG	SEDDE..GE..E			343
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKLGGG	RENAKALLKEDKA	LADAITLKIKES	IGSNEE....IMPL	PDEP..LE..EME	.....	.....	347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKLGGG	RENAKALLKEDKA	LADAITLKIKES	IGSNEE....IMPL	PDEP..LE..EME	.....	.....	347
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKLGGQ	RDITVKELIKDNPE	LAELEAKIREKL	QAK.....	.....	.....	.....	343
NTDB id 60879 REMIM1 RS11705 WP 011425583.1	SQRLGGG	RENAKTFLRDNPD	LAREIELALRQNA	GLIAD....RFLQ	NGG.PDAD..DG	DAA...AEM.....	.....	362
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQG	KNNAVKWLKENPEI	ADKLEQEIRNTLA	SNPN....SVLK	KATASDSND..ES	DVEEFSEEL.....	.....	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEI	SDAIDAKIRALNG	VEMH....ITEGT	QDETGE..R.....	PEE.....	.....	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEI	SDAIDAKIRALNG	VEMH....ITEGT	QDETGE..R.....	PEE.....		348
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NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQG	RDNCREFLRENAEL	AREIENKVREHLG	VTPM....GAVTLA	EEVEE..D.....			352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQG	KANACKYLLKENPEI	AKTLDKKLREML	LNPN....MQLIA	ETSSAAD..DVE	FGAVPEEF.....		354
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NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQG	KNNVIRYFEENPQI	STEIEAVIREQLLT	TKAS....DQTAA	.HDETEE..EPD	LL..ES.....		349
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQG	KANAACYLLENPEI	IGQIEIQQIRAKLL	VTSA....NTKAT	PVAEDLA..DADI			347
consensus	***!!!	*****	**	*****	*****	**	**	

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		IEE	
NTDB id 600 KW2 RS01765 WP 011675413.1	...	387	
NTDB id 269 KZH43 RS08665 WP 001085462.1	IEE	388	
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NTDB id 194 SPR RS08825 WP 001085462.1	IEE	388	
NTDB id 159 SP RS09750 WP 001085462.1	IEE	388	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	IEE	384	
NTDB id 499 SM12261 RS08315 WP 078228268.1	IEE	384	
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NTDB id 1074 ABD1 RS10195 WP 000344167.1	...	349	
NTDB id 1205 PSJM300 05545 AFN77183.1	...	347	
consensus			

- non conserved
- similar
- ≥ 50% conserved