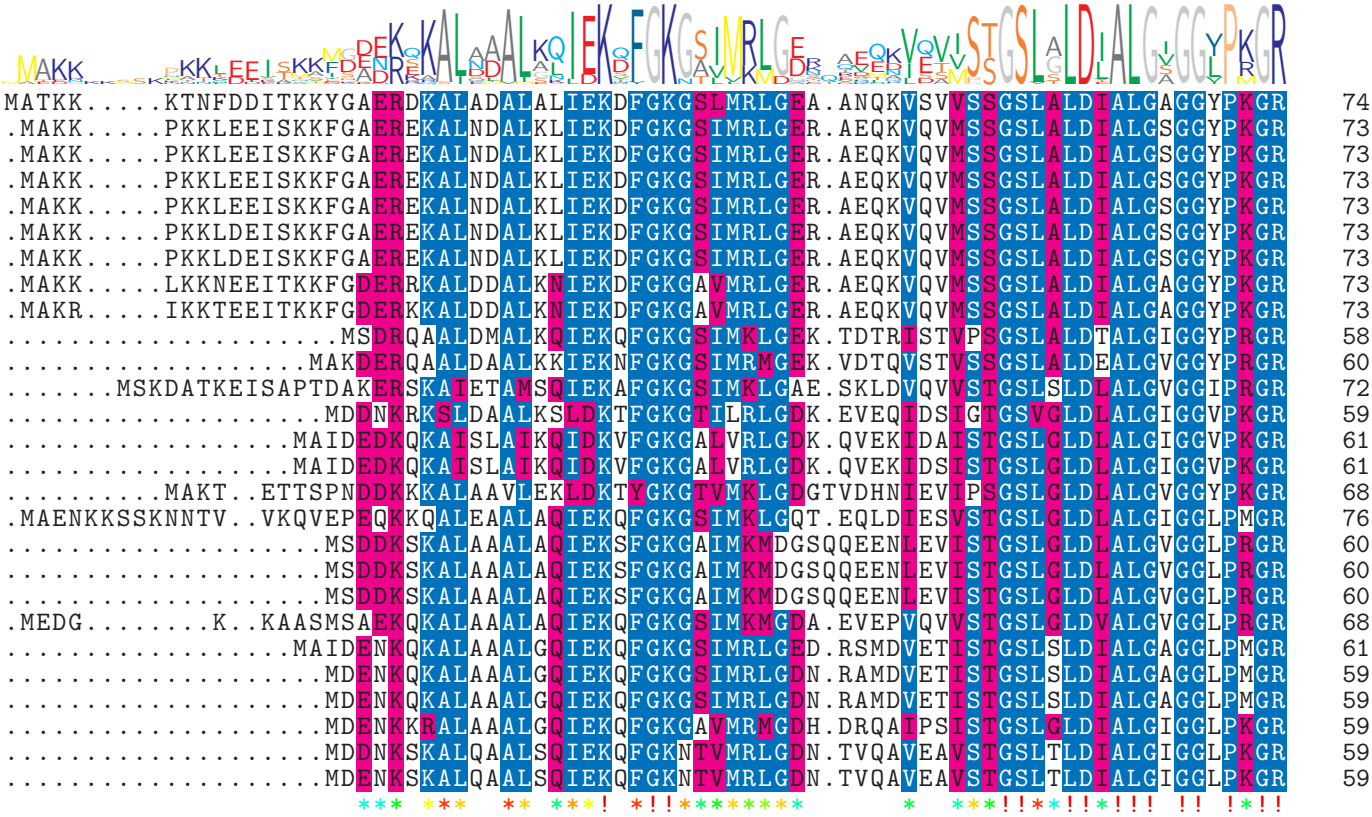


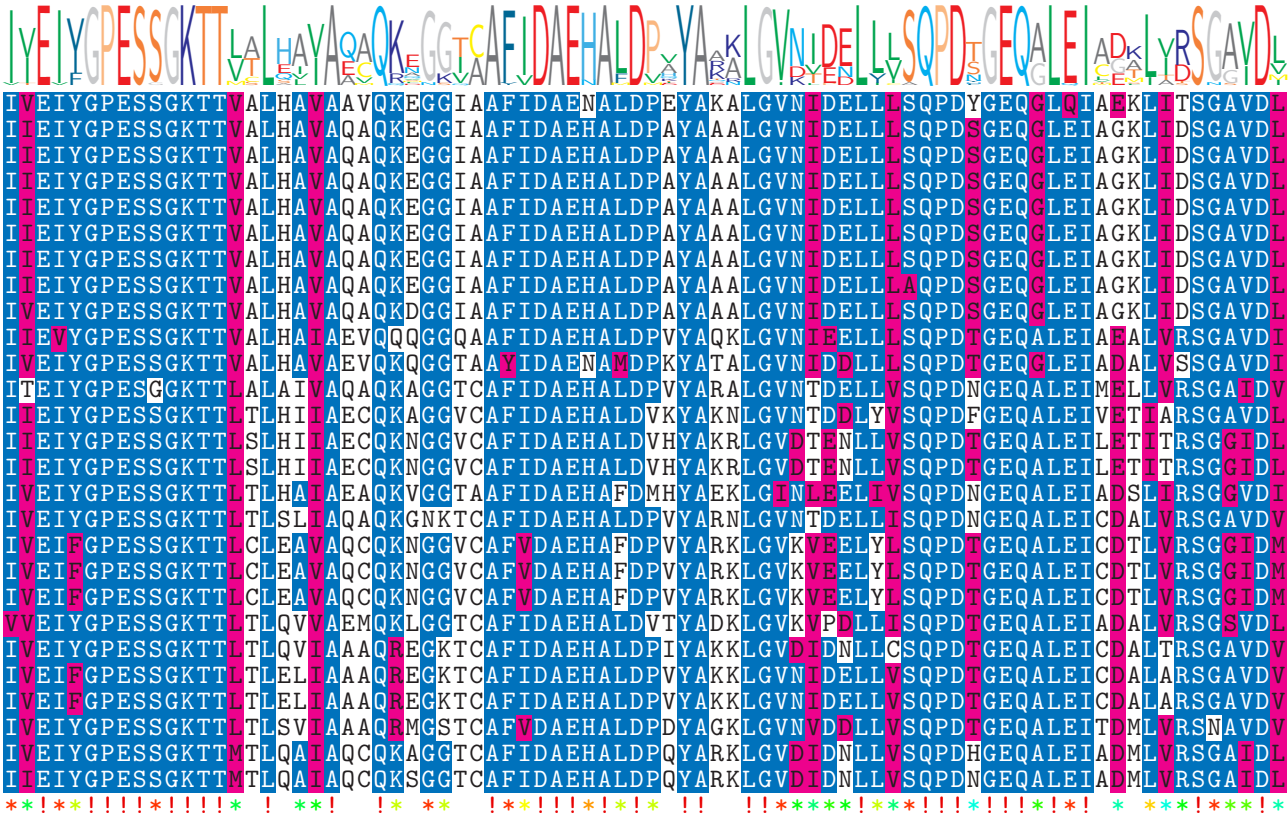
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NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 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
NTDB id 413867 GT391 RS12455 WP 010285348.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
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NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus



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NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
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NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus



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NTDB id 600 KW2 RS01765 WP 011675413.1	SVRLDVRG	STKIEEGS	.GDNKTQ	IGKITK	IKVVKNKVAPPF	KVALV	DIMF	GEGIS	STGEL	INIAVEEG	IIKKSG	AWFAYN	312					
NTDB id 269 KZH43 RS08665 WP 001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVVKNKVAPPF	KEAVV	EIMY	GEGIS	KTGEL	LKIASDL	DIIKKAG	AWYSYK	311					
NTDB id 228 SPD RS09265 WP 001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVVKNKVAPPF	KEAVV	EIMY	GEGIS	KTGEL	LKIASDL	DIIKKAG	AWYSYK	311					
NTDB id 194 SPR RS08825 WP 001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVVKNKVAPPF	KEAVV	EIMY	GEGIS	KTGEL	LKIASDL	DIIKKAG	AWYSYK	311					
NTDB id 159 SP RS09750 WP 001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVVKNKVAPPF	KEAVV	EIMY	GEGIS	KTGEL	LKIASDL	DIIKKAG	AWYSYK	311					
NTDB id 527 SMSK321 RS11065 WP 001085454.1	SVRLDVRG	STQIKGTG	.DQKDTN	VGKETK	IKVVKNKVAPPF	KEAFV	EIMY	GEGIS	KTGEL	LKIASDL	DIIKKAG	AWYSYK	311					
NTDB id 499 SM12261 RS08315 WP 078228268.1	SVRLDVRG	STQIKGTG	.DQKDTN	VGKETK	IKVVKNKVAPPF	KEAFV	EIMY	GEGIS	KTGEL	LKIASDL	DIIKKAG	AWYSYK	311					
NTDB id 453 Spy49 1753c ACI62003.1	SVRLDVRG	TQIKGTG	.DQKDS	IGKETK	IKVVKNKVAPPF	KVAEV	EIMY	GEGIS	RTGEL	VKIASDL	DIIQKAG	AWFSYN	311					
NTDB id 408 SMU RS09530 WP 002262392.1	SVRLDVRG	NTQIKGTG	.EQKDSN	IGKETK	IKVVKNKVAPPF	KEAFV	EIIY	GEGIS	RTGEL	VKIASDL	GIQKAG	AWYSYN	311					
NTDB id 115 BSU 16940 NP 389576.2	SVRL	EVRR	AEQLKQGN		DVMGN	KTKIKVVKNKVAPPF	RTA	AEVD	EIMY	GEGIS	KEGE	IIDL	GTGEL	DIVQKSGSWYSYE	292			
NTDB id 625 LCA RS02525 WP 011374196.1	TVR	LEVR	RAETIKNGT		DMIGN	RARIKVVKNKVAPPF	KVAEV	DIMY	QG	GISRT	GEL	VDMA	VEKDI	INKSGSWYSYG	294			
NTDB id 1313 DR RS12030 WP 010888966.1	SVRLDVR	KIG		QPTKVG	NDAA	VANT	VKIK	TVKN	KVAAPF	KEVELA	LVYG	KGFD	QLSD	LVGLA	ADMDI	IKKAGSFYSYG	307	
NTDB id 1245 Cj1673c YP 002345041.1	SVRLDVR	KVA		TL.KQN	EETIG	NRV	KV	IKVVKNKVAPPF	RQAEF	DVMF	GEGLS	REGEL	IDYG	VKLDIV	DKSGAWFSYK	294		
NTDB id 1214 NCTC11637 00359 SQJ03206.1	SVRI	DIRRI	A....	AL.KQN	EQHIGN	RAKA	IKVVKNKVAPPF	REAEF	DIMF	GEGIS	KEGE	IIDY	GVKLDIV	DKSGAWLSYQ	296			
NTDB id 1211 C694 RS00795 WP 000963128.1	SVRI	DIRRI	A....	SL.KQN	EQHIGN	RAKA	IKVVKNKVAPPF	REAEF	DIMF	GEGIS	KEGE	IIDY	GVKLDIV	DKSGAWLSYQ	296			
NTDB id 1334 RAOC RS04870 WP 004918236.1	SVRI	DIRRS	LSDTGK	IKDKSGEV	IGNR	TKV	IKVVKNKVAPPF	KS	AEFD	EIMY	GEGV	SKVGE	ILDV	ATDLDI	IQKSGSWFSYQ	307		
NTDB id 1389 A4U84 RS07560 WP 021112712.1	SVRLD	IRRCG		VV.KDG	DEIG	SETK	VV	KNKVAPPF	REVQ	FDIM	YGEGIS	RMNELL	ILAE	ANGFI	KKSGAWFSYD	310		
NTDB id 1130 NGFG RS03960 WP 003688695.1	SVRLD	IRRTG		SI.KKG	EEVLGN	ETRV	KV	IKNKVAPPF	RQAEF	DILY	GEGIS	WE	GELIDIG	VKNDI	INKSGAWYSYN	294		
NTDB id 1124 NGFG RS03960 WP 003688695.1	SVRLD	IRRTG		SI.KKG	EEVLGN	ETRV	KV	IKNKVAPPF	RQAEF	DILY	GEGIS	WE	GELIDIG	VKNDI	INKSGAWYSYN	294		
NTDB id 1123 OK783 RS03845 WP 003688695.1	SVRLD	IRRTG		SI.KKG	EEVLGN	ETRV	KV	IKNKVAPPF	RQAEF	DILY	GEGIS	WE	GELIDIG	VKNDI	INKSGAWYSYN	294		
NTDB id 1427 RS RS02760 WP 011000510.1	SVRLD	IRRI	G....	SI.KKG	DEVVGN	ETKV	VV	KNKVAPPF	REAI	FDILY	GAGV	SR	EGE	IIDL	GV	EAKVVE	EKSGAWYSYN	302
NTDB id 413867 GT391 RS12455 WP 010285348.1	SVRLD	IRRTG		AI.KEG	EEVVG	SETR	VV	KNKVAA	APFKQ	AEFQ	ILY	GEGINI	HGEL	VDL	GVKHKLI	EKAGAWYSYN	295	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	SVRLD	IRRTG		AI.KEG	EEVVG	NETRI	IKVVKNK	IAAPF	KEANTQ	IMYG	QGFN	REGEL	IDL	GVKHKM	VVEKSG	AWYSYN	293	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	SVRLD	IRRTG		AI.KEG	EEVVG	NETRI	IKVVKNK	IAAPF	KEANTQ	IMYG	QGFN	REGEL	IDL	GVKHKM	VVEKSG	AWYSYN	293	
NTDB id 1205 PSJM300 05545 AFN77183.1	SVRLD	IRRTG		AV.KEG	DEVVGS	ETRV	VV	KNKVAPPF	RQAEF	QILY	GKG	IYRN	GE	IIDL	GV	QGLV	EKSGAWYAYK	293
NTDB id 1022 ACIAD RS06390 WP 004925639.1	SVRLD	IRRI	G....	QV.KEG	DEIG	SETK	VV	KNKM	MAPPF	REAI	FQILY	GKGV	NQLG	ELVD	LAV	QQNIV	QKAGAWYSYQ	293
NTDB id 1074 ABD1 RS10195 WP 000344167.1	SVRLD	IRRI	G....	QV.KEG	DEIG	SETK	VV	KNKM	MAPPF	KEAI	FQILY	GKGT	NQLG	ELVD	LAV	QQDIV	QKAGAWYSYQ	293
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	KEKTIAYIAERPEME	QEIRDRVMAAIRAG	NAGEAPALAPAPAA	PEAAEA	.....	.....	363
NTDB id 1245 Cj1673c YP 002345041.1	DKKLGGG	RENSKAFLENPEIA	DEITKAIQNSMG	IEGMISGS	...	EDD..EGEE	.....	343
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKLGGG	RENAKALLKEDKAL	ADEITLKIKESIG	SNEEIMPL	...	PDE..PLEEME	.....	347
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKLGGG	RENAKALLKEDKAL	ADEITLKIKESIG	SNEEIMPL	...	PDE..PLEEME	.....	347
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKLGGG	RDITVKELIKDNPE	LAELEAKIREKLQ	AK	.....	.....	.....	343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQG	KNNAVKWLKENPEI	ADKLEQEIRNTL	ASNPNSVLK	...	ATASDSNDESDV	EEF.....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 413867 GT391 RS12455 WP 010285348.1	GDKIGQG	KANACNFLKENPAIA	AELDKKLREMLLH	KGNELTP	...	AAAGNSHDEDEF	AGE.....GNEEF	357
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQG	KANACKYLVKENPEI	AKTLDKKLREML	LNPNENMQLI	...	AETSSAAD	DVEFG.A.....VPEEF	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQG	KANACKYLVKENPEI	AKTLDKKLREML	LNPNENMQLI	...	AETSSAAD	DVEFG.A.....VPEEF	354
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQG	KANAAYLEENPEIG	EIEQQIRAKLLV	TSANTKA	...	TPVAEDLADADI	.....	347
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQG	KNNVIRYLEENPQI	STEIEAVIREQL	LTKASDQTA	...	A.HDETE	EEPDLLES.....	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQG	KNNVIRYFEENNQI	AEEIERNIREQL	LTGTNGAV	...	Q.I.EDE	EEPDLLE.....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					
NTDB id 1313 DR RS12030 WP 010888966.1	.....	363					
NTDB id 1245 Cj1673c YP 002345041.1	.....	343					
NTDB id 1214 NCTC11637 00359 SQJ03206.1	.....	347					
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					
NTDB id 1130 NGFG RS03960 WP 003688695.1	.....	348					
NTDB id 1124 NGFG RS03960 WP 003688695.1		348					
NTDB id 1123 OK783 RS03845 WP 003688695.1		348					
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NTDB id 1142 GTF74 RS11550 WP 000344154.1		354					
NTDB id 1205 PSJM300 05545 AFN77183.1		347					
NTDB id 1022 ACIAD RS06390 WP 004925639.1	.....	349					
NTDB id 1074 ABD1 RS10195 WP 000344167.1	.....	349					
consensus							

-  non conserved
-  similar
-  ≥ 50% conserved