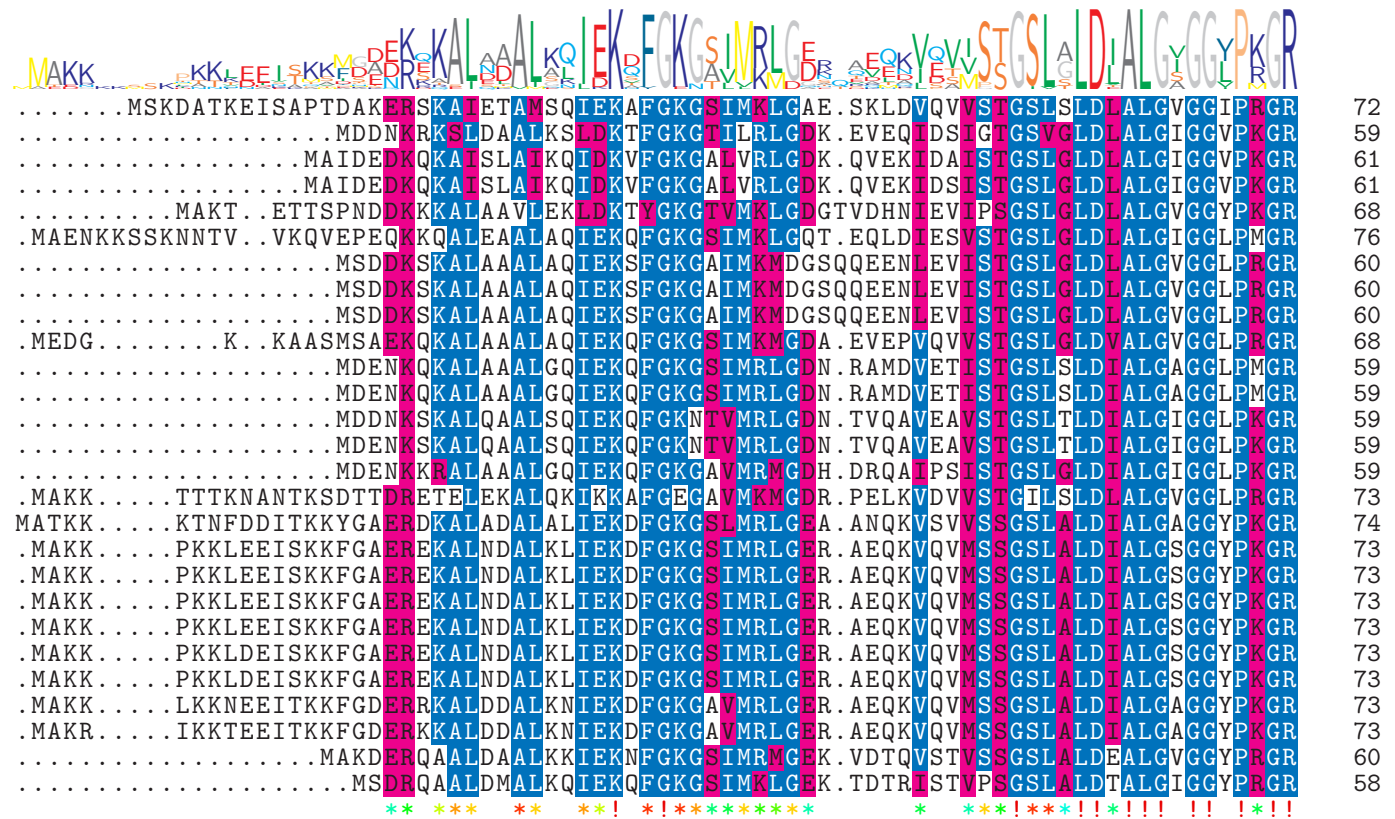


```

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 1165 A1552VC RS01565 WP 000344154.1
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
NTDB id 65344 LBCZ RS12575 WP 025013132.1
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 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
consensus

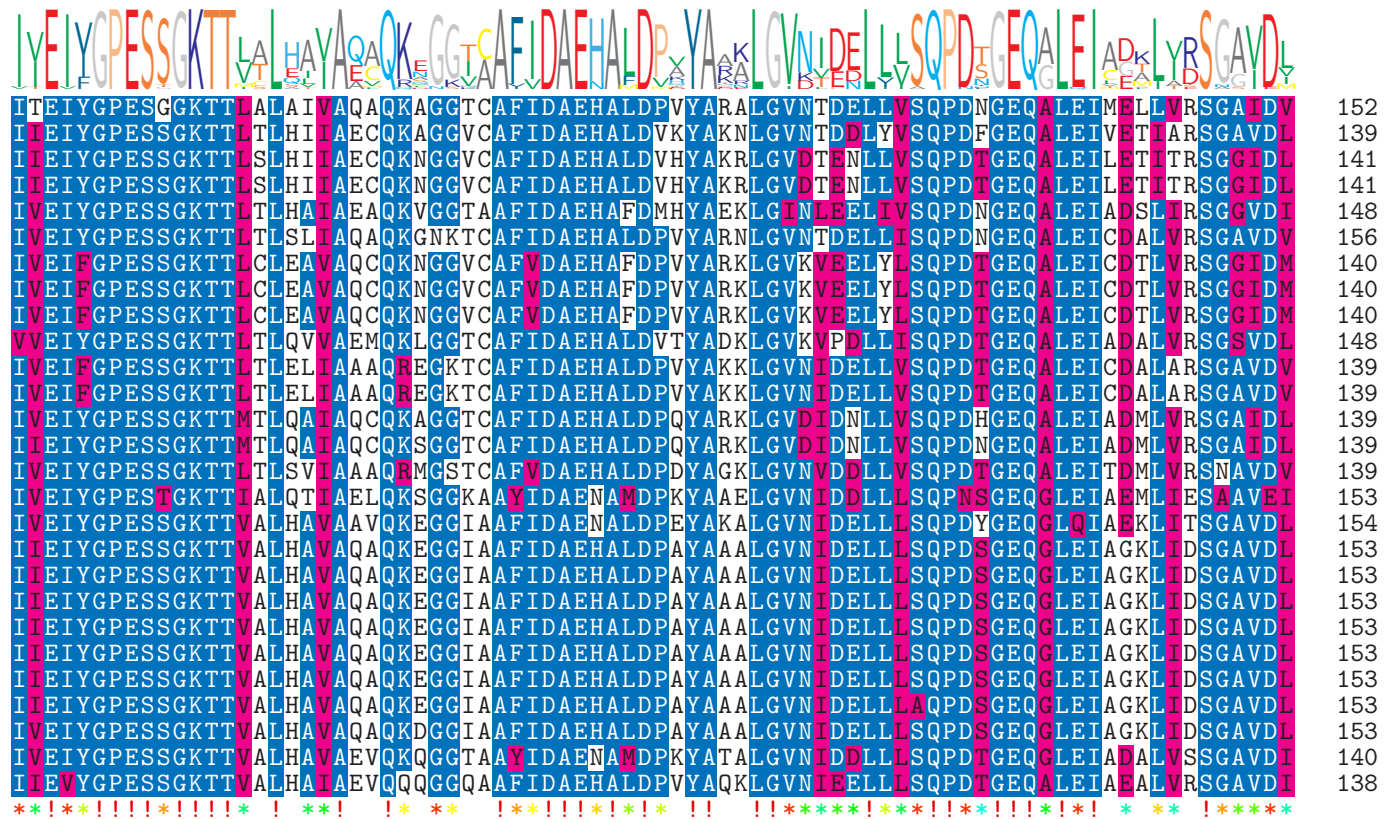
```



```

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 1165 A1552VC RS01565 WP 000344154.1
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
NTDB id 65344 LBCZ RS12575 WP 025013132.1
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 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
consensus

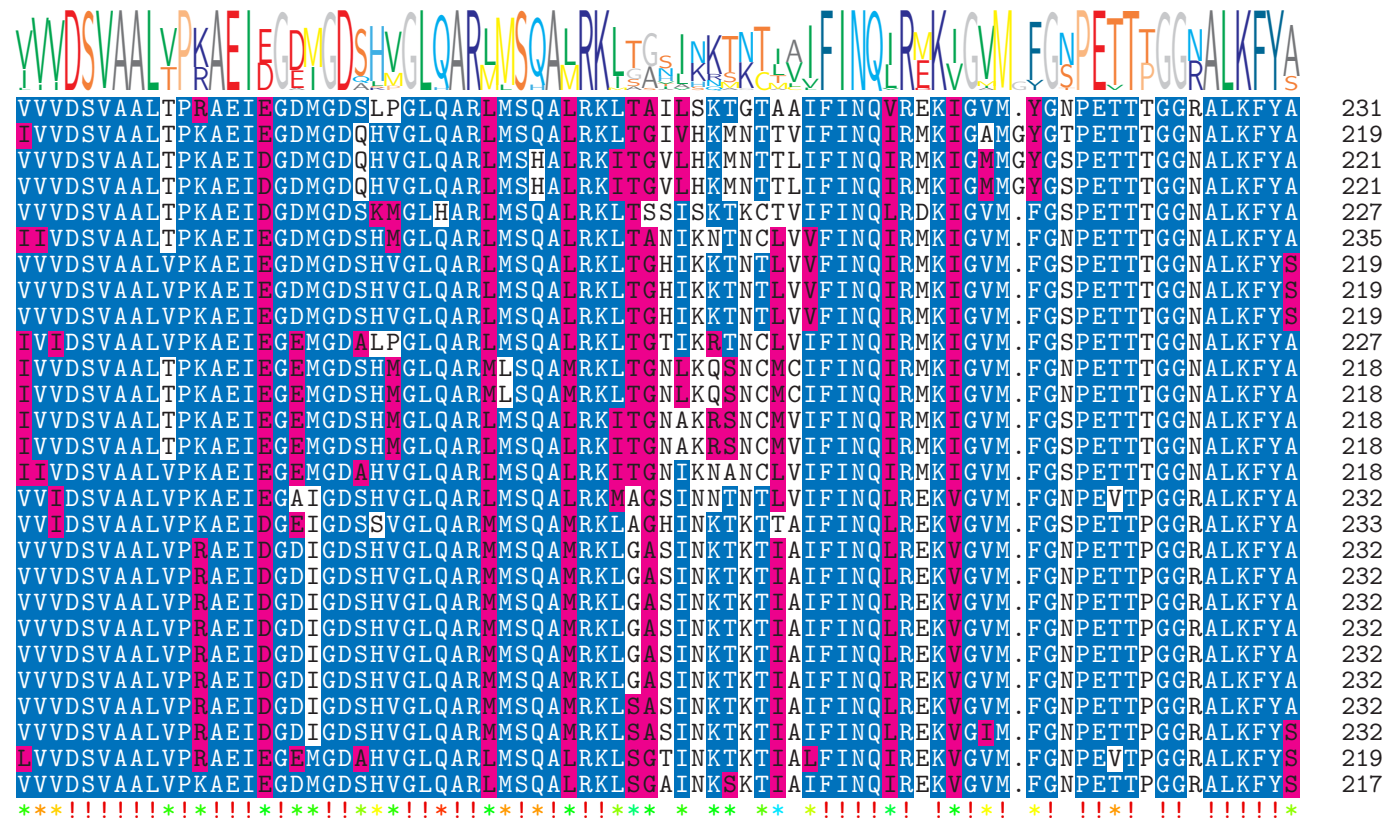
```



```

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 1165 A1552VC RS01565 WP 000344154.1
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
NTDB id 65344 LBCZ RS12575 WP 025013132.1
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 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
consensus

```



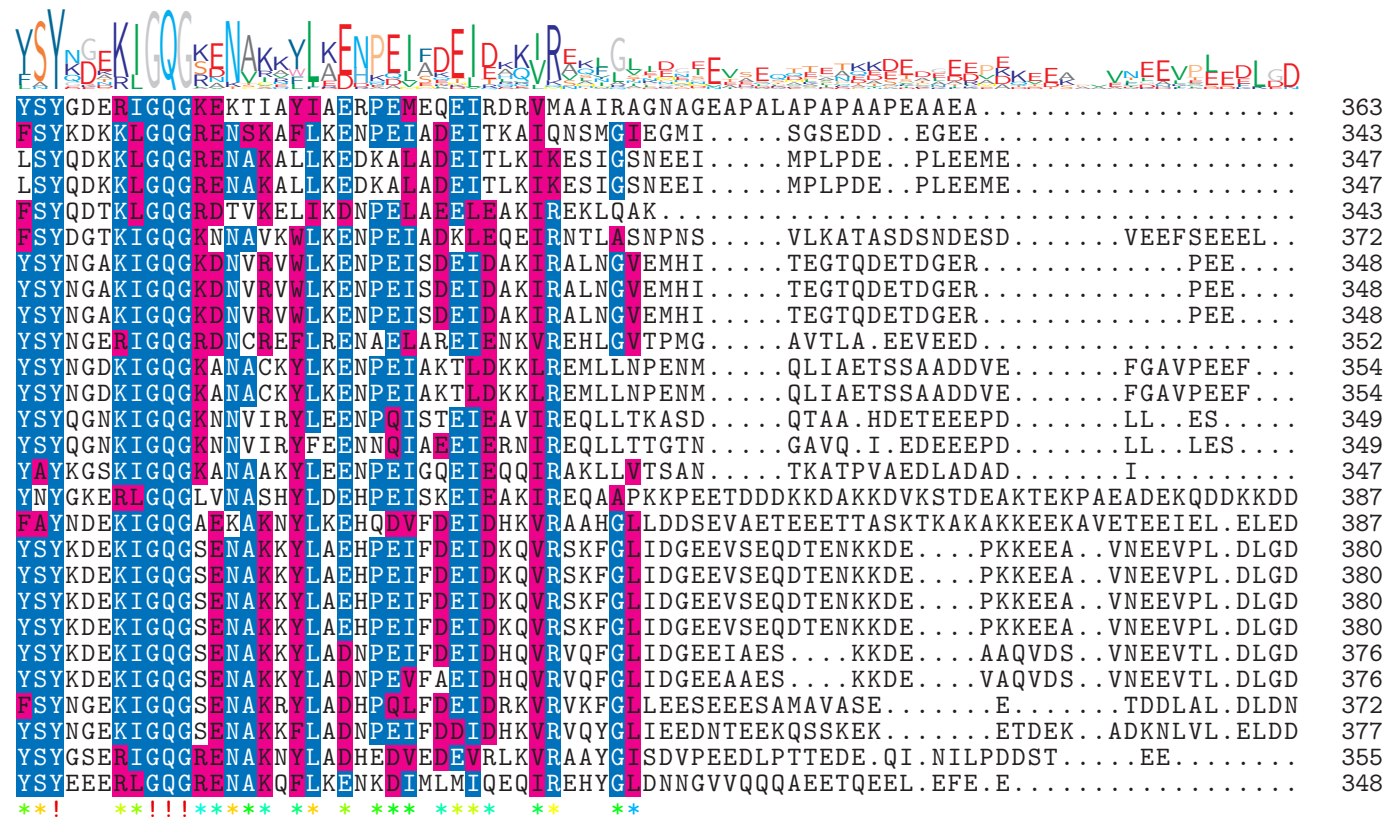
logo

NTDB id 1313 DR RS12030 WP 010888966.1	SVRLDVRKIGQ....PTKVGND	AVANTV	KIKTVKNKVA	APPFKE	VELAL	IVYGKGF	QDLS	DLVGL	AA....	DMDI	IKKAG	SGF	303	
NTDB id 1245 Cj1673c YP 002345041.1	SVRLDVRKVAT....L.KQNE	EPIGNRV	KVKVKNKV	APPFRQ	AEFD	VMFGE	GLS	REGEL	IDYGV....	KLDI	VDKSG	AW	290	
NTDB id 1214 NCTC11637 00359 SQJ03206.1	SVRIDIRRIAA....L.KQNE	QHIGNRA	KA	KVKNKV	APPFR	EAEFD	IMFGE	GISKEGE	IIDYGV....	KLDI	VDKSG	AW	292	
NTDB id 1211 C694 RS00795 WP 000963128.1	SVRIDIRRIAS....L.KQNE	EQHIGNRA	KA	KVKNKV	APPFR	EAEFD	IMFGE	GISKEGE	IIDYGV....	KLDI	VDKSG	AW	292	
NTDB id 1334 RAOC RS04870 WP 004918236.1	SVRIDIRRLSDTGKIKDKS	GEVIGNRT	KVKVKNKV	APPFK	SAEFD	DIMYG	EGVSKV	GEILD	VAT....	DLDI	IQKSG	SW	303	
NTDB id 1389 A4U84 RS07560 WP 021112712.1	SVRLDIRRCGV....V.KDG	DEIIGSET	KVKVKNKV	APPFR	REVQF	DIMYG	EGISRM	NELLIL	AE....	ANGF	IKKSG	AW	306	
NTDB id 1130 NGFG RS03960 WP 003688695.1	SVRLDIRRTGS....I.KKG	EEVLGN	ETRVKVI	KNKVAPP	FRQAEF	DILYG	EGISW	EGELID	IGV....	KNDI	INKSG	AW	290	
NTDB id 1124 NGFG RS03960 WP 003688695.1	SVRLDIRRTGS....I.KKG	EEVLGN	ETRVKVI	KNKVAPP	FRQAEF	DILYG	EGISW	EGELID	IGV....	KNDI	INKSG	AW	290	
NTDB id 1123 OK783 RS03845 WP 003688695.1	SVRLDIRRTGS....I.KKG	EEVLGN	ETRVKVI	KNKVAPP	FRQAEF	DILYG	EGISW	EGELID	IGV....	KNDI	INKSG	AW	290	
NTDB id 1427 RS RS02760 WP 011000510.1	SVRLDIRRIGS....I.KKG	DEVVGN	ETKVKVKNKV	APPFR	EAEF	DILYG	AGVSR	EGEII	DLGV....	EAKV	VEKSG	AW	298	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	SVRLDIRRTGA....I.KEG	EEVLGN	ETRIKVVKNK	IAAPF	KEANT	QIMYG	QGFNR	EGELID	LGV....	KHKM	VEKSG	AW	289	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	SVRLDIRRTGA....I.KEG	EEVLGN	ETRIKVVKNK	IAAPF	KEANT	QIMYG	QGFNR	EGELID	LGV....	KHKM	VEKSG	AW	289	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	SVRLDIRRIGQ....V.KEG	DEIIGSET	KVKVKNK	MAPPF	REAI	FQILY	GKGVN	QLGEL	VDLAV....	QQNI	VQKAG	AW	289	
NTDB id 1074 ABD1 RS10195 WP 000344167.1	SVRLDIRRIGQ....V.KEG	DEIIGSET	KVKVKNK	MAPPF	KEAIF	QILY	GKGTN	QLGEL	VDLAV....	QQDI	VQKAG	AW	289	
NTDB id 1205 PSJM300 05545 AFN77183.1	SVRLDIRRTGA....V.KEG	DEVVGS	ETRVKVKVKNKV	APPFR	QAEF	QILY	GKGIY	RNGEII	DLGV....	QQGL	VEKSG	AW	289	
NTDB id 65344 LBCZ RS12575 WP 025013132.1	SVRIEVKKGQQVKD	GK....DV	IGFASKL	KVT	KNKVAPP	FKTV	VET	MSFG	HGIEH	NTDM	INLVTE	KDSK	FDVITKSGSW	307
NTDB id 600 KW2 RS01765 WP 011675413.1	SVRLDVRGSTKIEEGS	.GDNKTQ	IGKITKIKVVKNKV	APPFK	KVALV	DIMF	GEGIS	STGELL	NI	AV....	EEGI	IKKSG	AW	308
NTDB id 269 KZH43 RS08665 WP 001085462.1	SVRLDVRGNTQIKGTG	.DQKETN	VGKETKIKVVKNKV	APPFK	EA	VVEIMYG	EGISKT	GELLK	IAS....	DLDI	IKKAG	AW	307	
NTDB id 228 SPD RS09265 WP 001085462.1	SVRLDVRGNTQIKGTG	.DQKETN	VGKETKIKVVKNKV	APPFK	EA	VVEIMYG	EGISKT	GELLK	IAS....	DLDI	IKKAG	AW	307	
NTDB id 194 SPR RS08825 WP 001085462.1	SVRLDVRGNTQIKGTG	.DQKETN	VGKETKIKVVKNKV	APPFK	EA	VVEIMYG	EGISKT	GELLK	IAS....	DLDI	IKKAG	AW	307	
NTDB id 159 SP RS09750 WP 001085462.1	SVRLDVRGNTQIKGTG	.DQKETN	VGKETKIKVVKNKV	APPFK	EA	VVEIMYG	EGISKT	GELLK	IAS....	DLDI	IKKAG	AW	307	
NTDB id 499 SM12261 RS08315 WP 078228268.1	SVRLDVRGSTQIKGTG	.DQKDTN	VGKETKIKVVKNKV	APPFK	EA	FVEIMYG	EGISKT	GELLK	IAS....	DLDI	IKKAG	AW	307	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	SVRLDVRGSTQIKGTG	.DQKDTN	VGKETKIKVVKNKV	APPFK	EA	FVEIMYG	EGISKT	GELLK	IAS....	DLDI	IKKAG	AW	307	
NTDB id 453 Spy49 1753c ACI62003.1	SVRLDVRGTTQIKGTG	.DQKDSS	IGKETKIKVVKNKV	APPFK	VAEVE	IMYG	EGISRT	GELV	KIAS....	DLDI	IQKAG	AW	307	
NTDB id 408 SMU RS09530 WP 002262392.1	SVRLDVRGNTQIKGTG	.EQKDSN	IGKETKIKVVKNKV	APPFK	EA	FVEI	IYGEGIS	RTGELV	KIAS....	DLGI	IQKAG	AW	307	
NTDB id 625 LCA RS02525 WP 011374196.1	TVRLEVRR	AETIKNGT....DM	IGNRARI	KVKNKV	APPFK	VAEVD	DIMYG	QGISRT	GELVDM	AV....	EKDI	INKSGSW	290	
NTDB id 115 BSU 16940 NP 389576.2	SVRLEVRR	AEQLKQGN....DV	MGNKTKIKVVKNKV	APPFR	TA	AEVD	DIMYG	EGISKEGE	IIDLGT....	ELDI	VQKSGSW	288		
consensus	*!!*****	*	**	*****!!*!!*!!*!!*	*	*****!!*!!*!!*!!*	*****	*	***	!!**				

```

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 1165 A1552VC RS01565 WP 000344154.1
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
NTDB id 65344 LBCZ RS12575 WP 025013132.1
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 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
consensus

```



logo

		EEEEE	
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
NTDB id 1427 RS RS02760 WP 011000510.1	.....		352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	.....		354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	.....		354
NTDB id 1022 ACIAD RS06390 WP 004925639.1	.....		349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	.....		349
NTDB id 1205 PSJM300 05545 AFN77183.1	.....		347
NTDB id 65344 LBCZ RS12575 WP 025013132.1	PSSFGVDRLV		397
NTDB id 600 KW2 RS01765 WP 011675413.1	.....		387
NTDB id 269 KZH43 RS08665 WP 001085462.1	ELEIEIEE..		388
NTDB id 228 SPD RS09265 WP 001085462.1	ELEIEIEE..		388
NTDB id 194 SPR RS08825 WP 001085462.1	ELEIEIEE..		388
NTDB id 159 SP RS09750 WP 001085462.1	ELEIEIEE..		388
NTDB id 499 SM12261 RS08315 WP 078228268.1	ELEIEIEE..		384
NTDB id 527 SMSK321 RS11065 WP 001085454.1	ELEIEIEE..		384
NTDB id 453 Spy49 1753c ACI62003.1	GIEIED....		378
NTDB id 408 SMU RS09530 WP 002262392.1	TIELED....		383
NTDB id 625 LCA RS02525 WP 011374196.1	.....		355
NTDB id 115 BSU 16940 NP 389576.2	.....		348
consensus			

- X non conserved
- X similar
- X ≥ 50% conserved