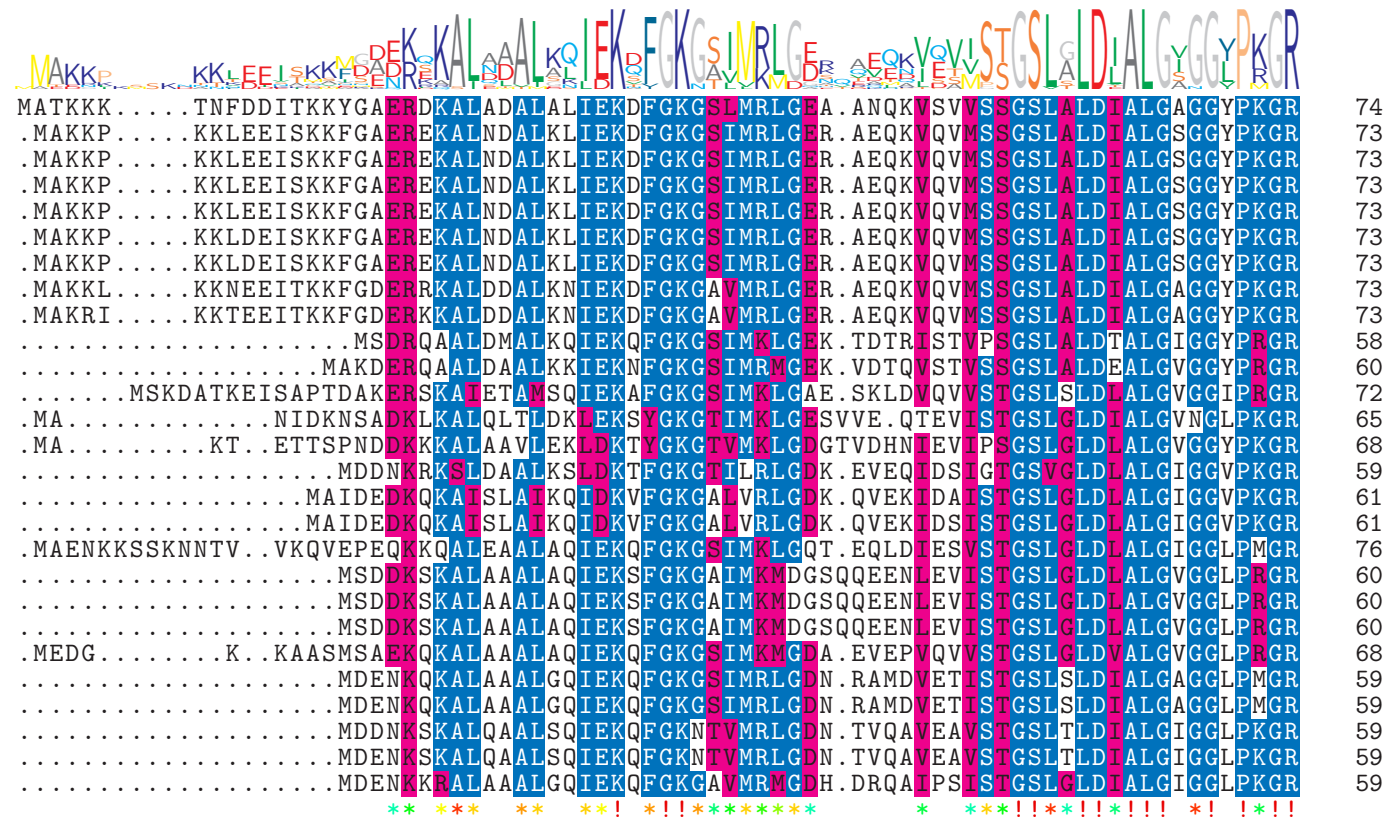


```

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 115 BSU 16940 NP 389576.2
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 384137 DIU31 RS20875 WP 090534412.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 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
consensus

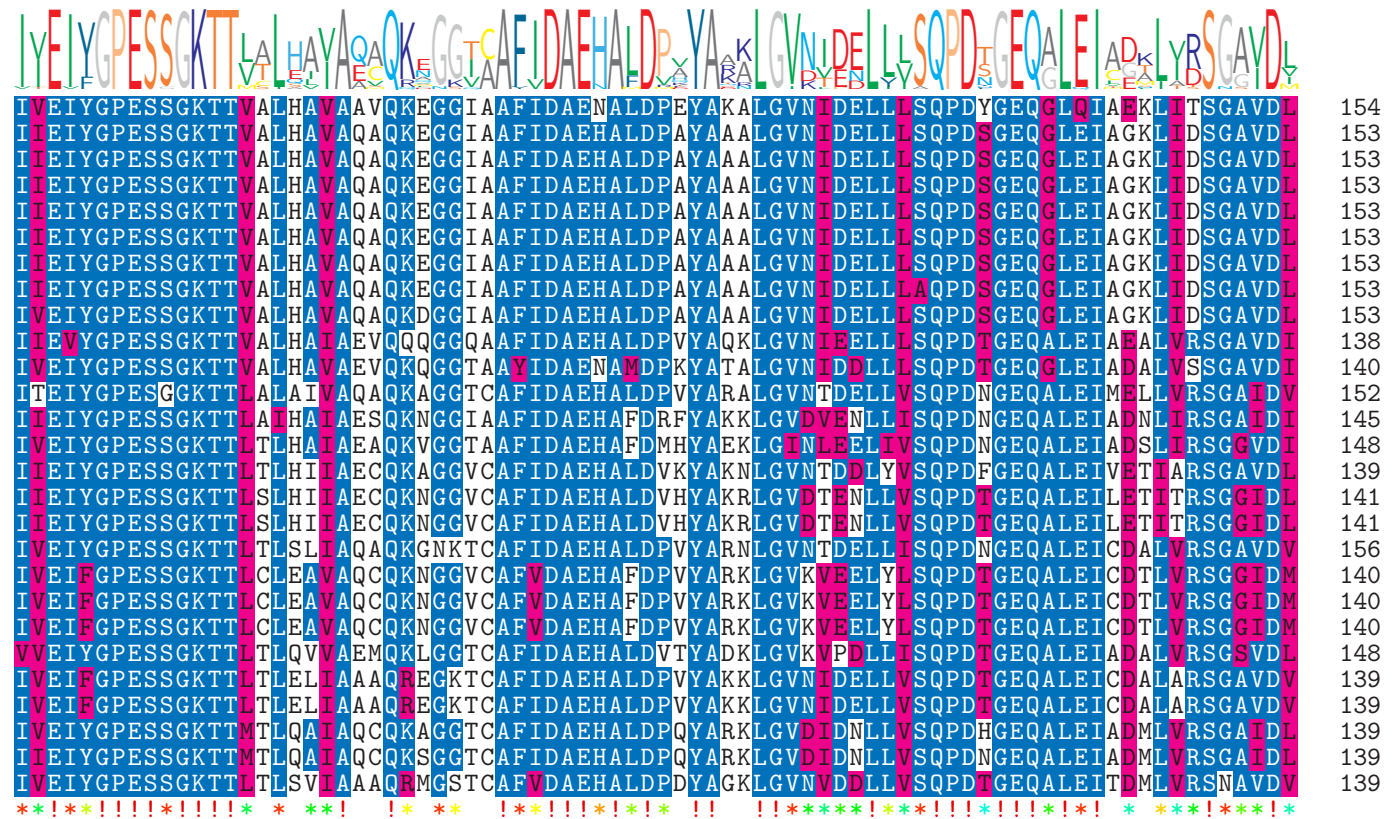
```



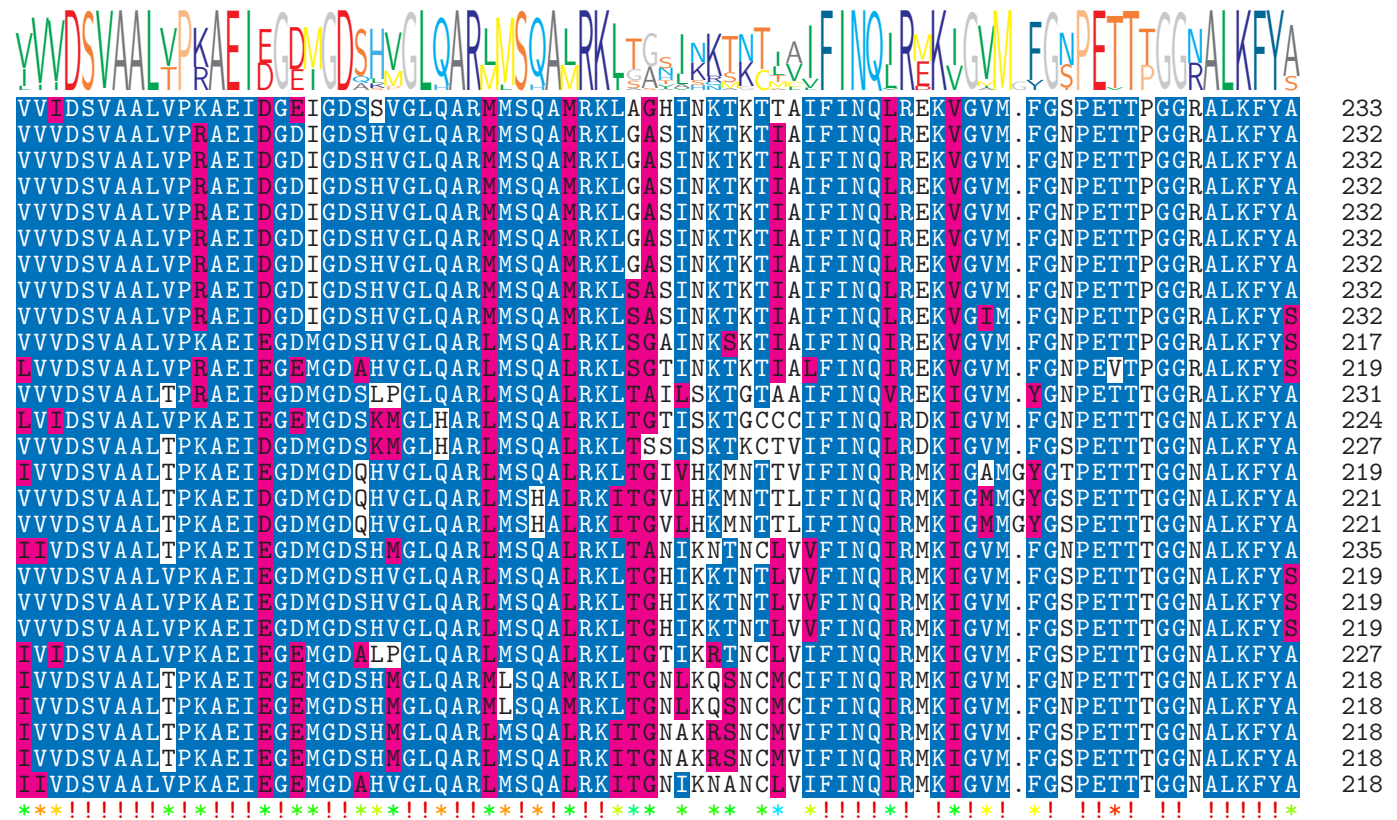
```

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 115 BSU 16940 NP 389576.2
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 384137 DIU31 RS20875 WP 090534412.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 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
consensus

```



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 115 BSU 16940 NP 389576.2
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 384137 DIU31 RS20875 WP 090534412.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 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
consensus



logo

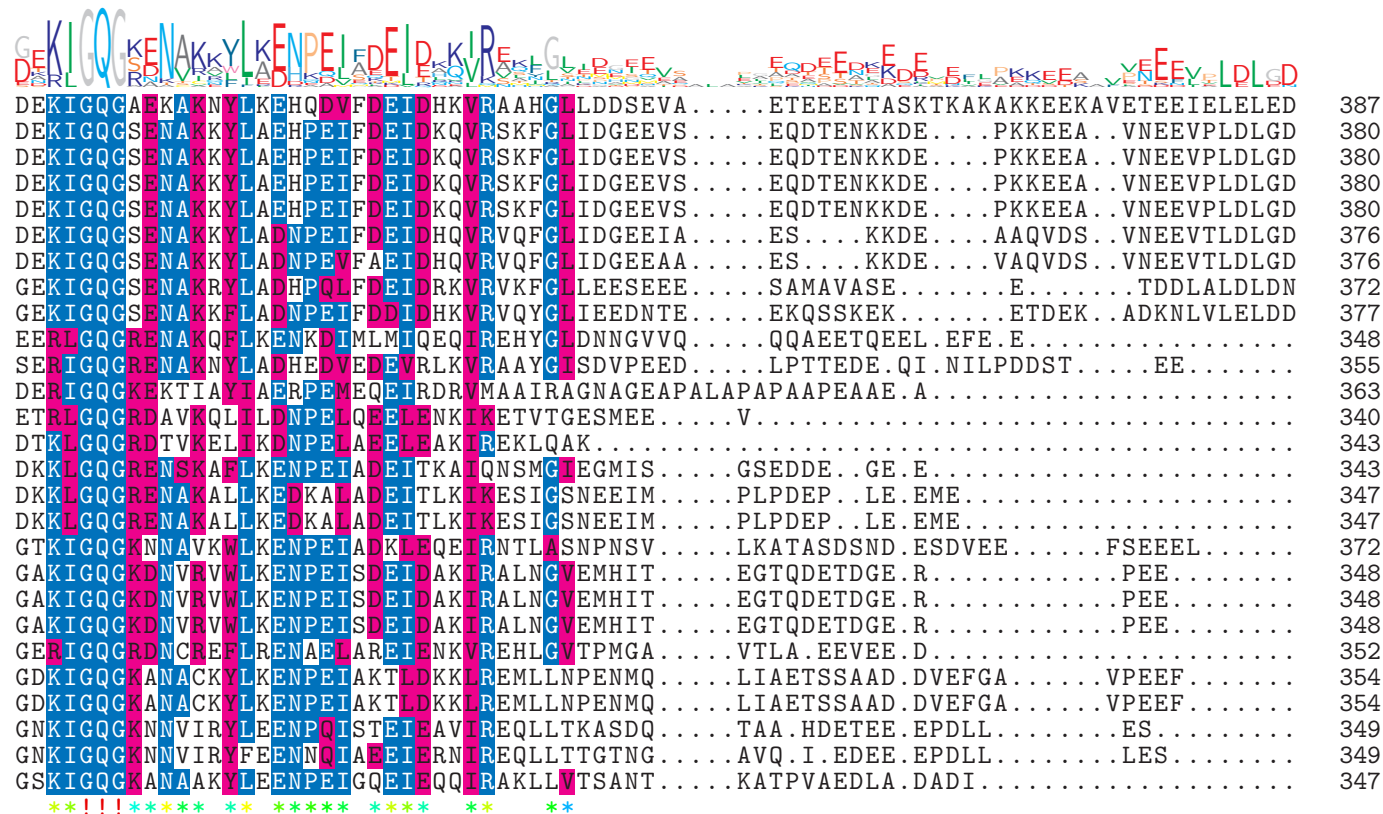
NTDB id 600 KW2 RS01765 WP 011675413.1	SVRLDVRGSTKIEEGS.GDNKTQIGKITKIKVVKNKVAPPFKVALVDIMFGEGISSTGELINIAVEEGI	IKKKS	GAWFAYN	312			
NTDB id 269 KZH43 RS08665 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETNVGKETKIKVVKNKVAPPFKEAVVEIMYGE	GISKGTGELLKIASDL	DIKKAGAWYSYK	311			
NTDB id 228 SPD RS09265 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETNVGKETKIKVVKNKVAPPFKEAVVEIMYGE	GISKGTGELLKIASDL	DIKKAGAWYSYK	311			
NTDB id 194 SPR RS08825 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETNVGKETKIKVVKNKVAPPFKEAVVEIMYGE	GISKGTGELLKIASDL	DIKKAGAWYSYK	311			
NTDB id 159 SP RS09750 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETNVGKETKIKVVKNKVAPPFKEAVVEIMYGE	GISKGTGELLKIASDL	DIKKAGAWYSYK	311			
NTDB id 499 SM12261 RS08315 WP 078228268.1	SVRLDVRGSTQIKGTG.DQKDTNVGKETKIKVVKNKVAPPFKEAFVEIMYGE	GISKGTGELLKIASDL	DIKKAGAWYSYK	311			
NTDB id 527 SMSK321 RS11065 WP 001085454.1	SVRLDVRGSTQIKGTG.DQKDTNVGKETKIKVVKNKVAPPFKEAFVEIMYGE	GISKGTGELLKIASDL	DIKKAGAWYSYK	311			
NTDB id 453 Spy49 1753c ACI62003.1	SVRLDVRGTTQIKGTG.DQKDSNIGKETKIKVVKNKVAPPFKVAEVEIMYGE	GISRTGELVKIASDL	DIQKAGAWFSYN	311			
NTDB id 408 SMU RS09530 WP 002262392.1	SVRLDVRGNTQIKGTG.EQKDSNIGKETKIKVVKNKVAPPFKEAFVEI	IYGEGISRTGELVKIASDL	GIIQKAGAWYSYN	311			
NTDB id 115 BSU 16940 NP 389576.2	SVRLEVRRAEQLKQGN.....DVMGNKTKIKVVKNKVAPPFR	TAEVDIMYGE	GISKEGEIIDLGT	ELDIVQKSGSWYSYE	292		
NTDB id 625 LCA RS02525 WP 011374196.1	TVRLEVRRAETIKNGT.....DMIGNRARIKVVKNKVAPPFKVAEVD	IMYGGISRTGELVDM	AVEKDIINKSGSWYSYG	294			
NTDB id 1313 DR RS12030 WP 010888966.1	SVRLDVRKIGQP....TKVGNDAAVANTVKIKTVKNKVAAPFKE	VELALVYGKGF	QDLSDLVGLA	ADMDIINKKAGSFYSYG	307		
NTDB id 384137 DIU31 RS20875 WP 090534412.1	SVRLDVRRIISQI.....KDTDEVSGNRVKVIVKNKVAPPFR	VAEFDIMFGEGISKAGE	IIDLGV	VEYNIIKKAGSWFSYG	299		
NTDB id 1334 RAO RS04870 WP 004918236.1	SVRIDIRRLSDTGKIKDKSGEVIGNRTKVVKNKVAPPFKSAEFD	IMYGEVSKVGEILD	VATDLDIIQKSGSWFSYQ	307			
NTDB id 1245 Cj1673c YP 002345041.1	SVRLDVRKVATL.....KQNEEPIGNRVKVVKNKVAPPFR	QAEFDVMFGEGLS	REGELIDYG	VKLDIVDKSGAWFSYK	294		
NTDB id 1214 NCTC11637 00359 SQJ03206.1	SVRIDIRRIAL.....KQNEQHIGNRAKAKVVKNKVAPPF	REAEFDIMFGEGISKEGE	IIDYG	VKLDIVDKSGAWLSYQ	296		
NTDB id 1211 C694 RS00795 WP 000963128.1	SVRIDIRRIASL.....KQNEQHIGNRAKAKVVKNKVAPPF	REAEFDIMFGEGISKEGE	IIDYG	VKLDIVDKSGAWLSYQ	296		
NTDB id 1389 A4U84 RS07560 WP 021112712.1	SVRLDIRRCGV.....KDGEIIGSETKVVKNKVAPPFR	REVQFDIMYGE	GISR	MNELILAEANGFIKKSGAWFSYD	310		
NTDB id 1130 NGFG RS03960 WP 003688695.1	SVRLDIRRTGSI.....KKGEEVLGNETRVKVIKNKVAPPFR	QAEFDILYGE	GISWEGELIDIGVKN	DIINKSGAWYSYN	294		
NTDB id 1124 NGFG RS03960 WP 003688695.1	SVRLDIRRTGSI.....KKGEEVLGNETRVKVIKNKVAPPFR	QAEFDILYGE	GISWEGELIDIGVKN	DIINKSGAWYSYN	294		
NTDB id 1123 OK783 RS03845 WP 003688695.1	SVRLDIRRTGSI.....KKGEEVLGNETRVKVIKNKVAPPFR	QAEFDILYGE	GISWEGELIDIGVKN	DIINKSGAWYSYN	294		
NTDB id 1427 RS RS02760 WP 011000510.1	SVRLDIRRIGSI.....KKGDEVVGNETKVVKNKVAPPF	REAI	FDILY	GAGVSREGEIIDLGV	EAKVVEKSGAWYSYN	302	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	SVRLDIRRTGAI.....KEGEEVVGNETRIKVVKNK	IAAPFKEANTQIMYGG	GFNREGELID	LG	VKHKMVEKSGAWYSYN	293	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	SVRLDIRRTGAI.....KEGEEVVGNETRIKVVKNK	IAAPFKEANTQIMYGG	GFNREGELID	LG	VKHKMVEKSGAWYSYN	293	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	SVRLDIRRIGV.....KEGDEIIGSETKVVKNKM	MAPPFREAI	FIQILY	GKGVNQLGELVD	LAVQQNIVQKAGAWYSYQ	293	
NTDB id 1074 ABD1 RS10195 WP 000344167.1	SVRLDIRRIGV.....KEGDEIIGSETKVVKNKM	MAPPFKEAI	FIQILY	GKGTNQLGELVD	LAVQQDIVQKAGAWYSYQ	293	
NTDB id 1205 PSJM300 05545 AFN77183.1	SVRLDIRRTGAV.....KEGDEVVGS	ETRVKVVKNKVAPPFR	QAEFQILY	GKGIYRNGEIIDL	GV	QQGLVEKSGAWAYK	293
consensus	*!!**!* *	*	**	*****!!*!!*!!*!!* *	*****!!*!!*!!* ***** *	***** !!*****!	

```

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 115 BSU 16940 NP 389576.2
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 384137 DIU31 RS20875 WP 090534412.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 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

```

consensus



logo

		ELELEE	
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 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 384137 DIU31 RS20875 WP 090534412.1	.....		340
NTDB id 1334 RAOC RS04870 WP 004918236.1	.....		343
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 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
consensus			

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