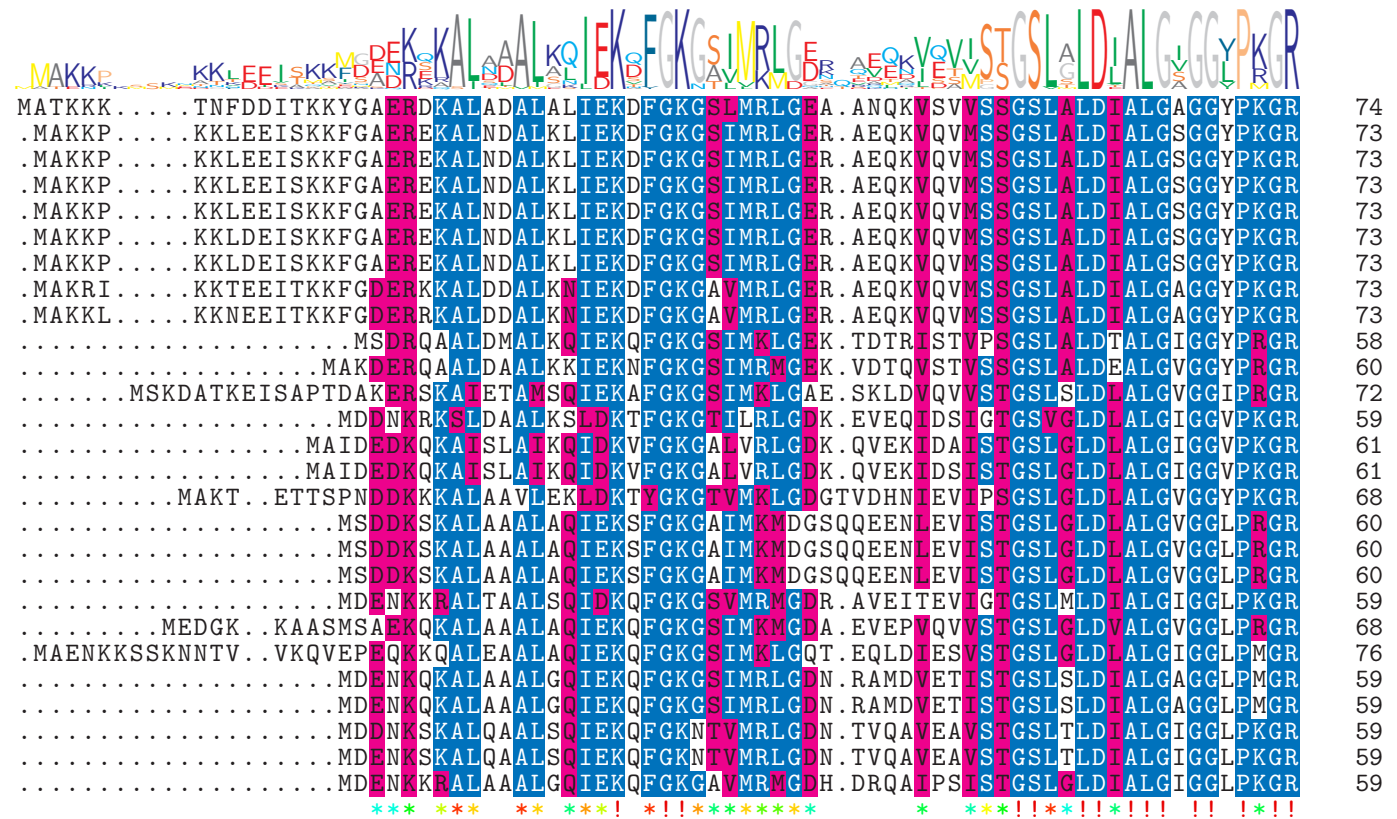


```

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 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 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
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 669216 IEQ11 RS09110 WP 036111514.1
NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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

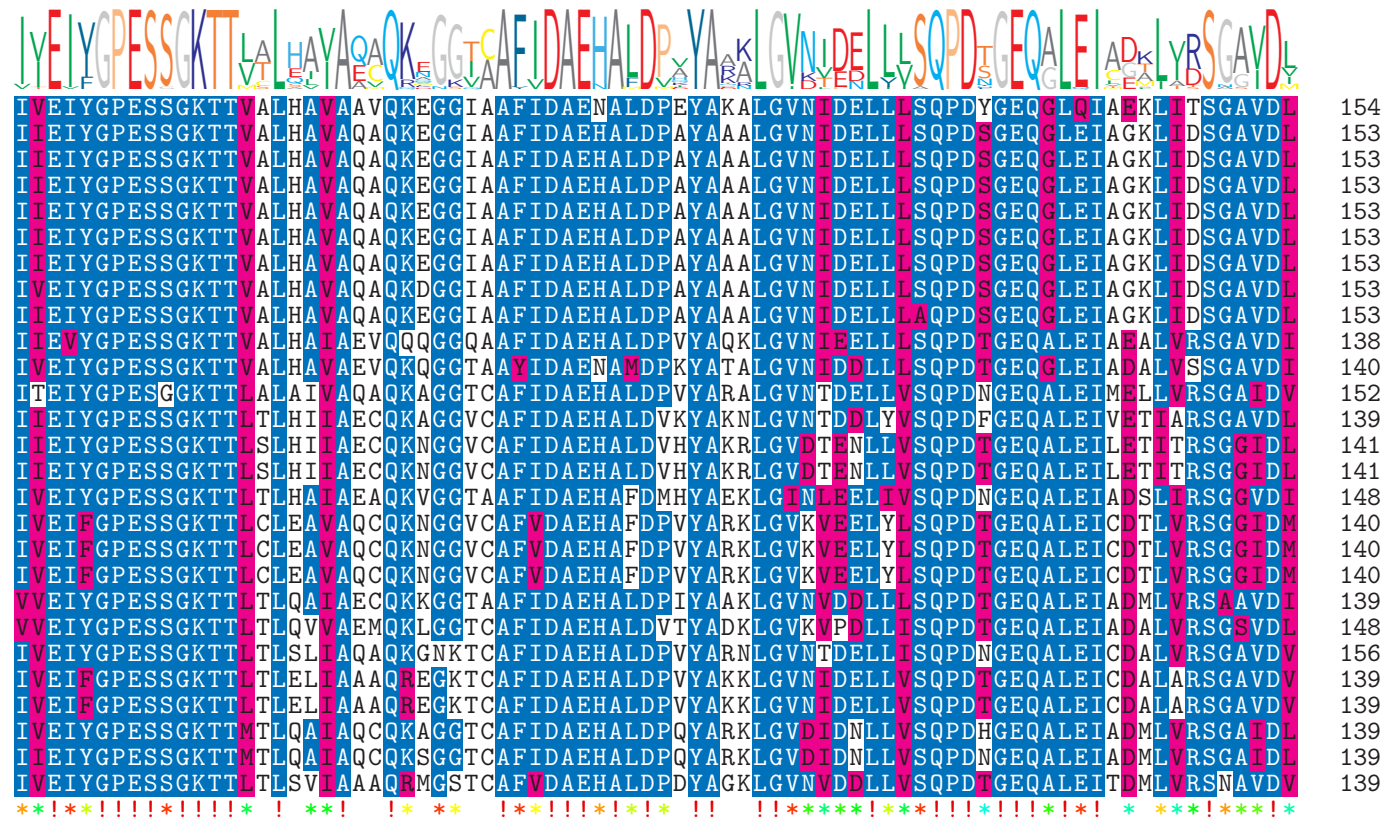
```



```

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 527 SMSK321 RS11065 WP 001085454.1
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 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
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 669216 IEQ11 RS09110 WP 036111514.1
NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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

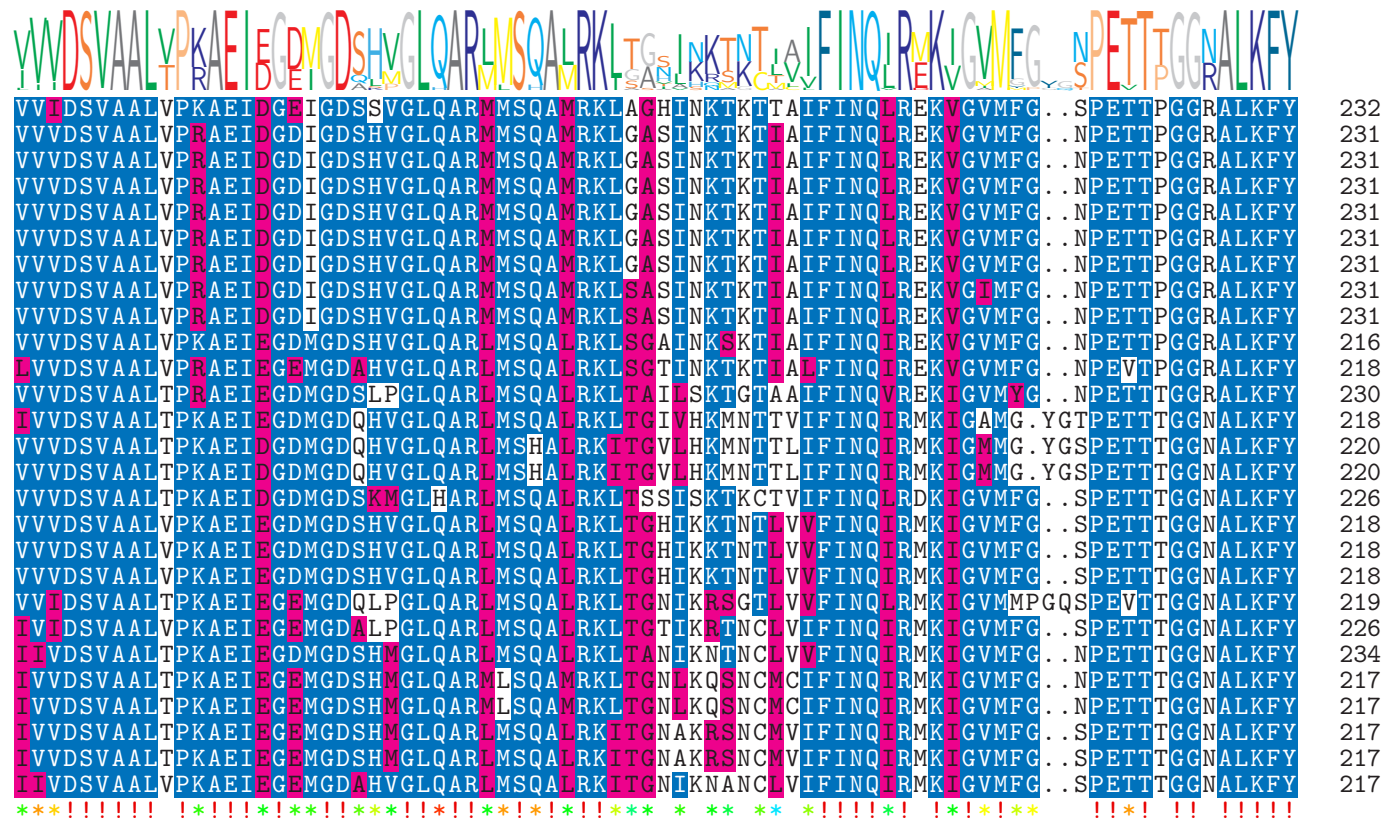
```



```

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 527 SMSK321 RS11065 WP 001085454.1
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 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
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 669216 IEQ11 RS09110 WP 036111514.1
NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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

```

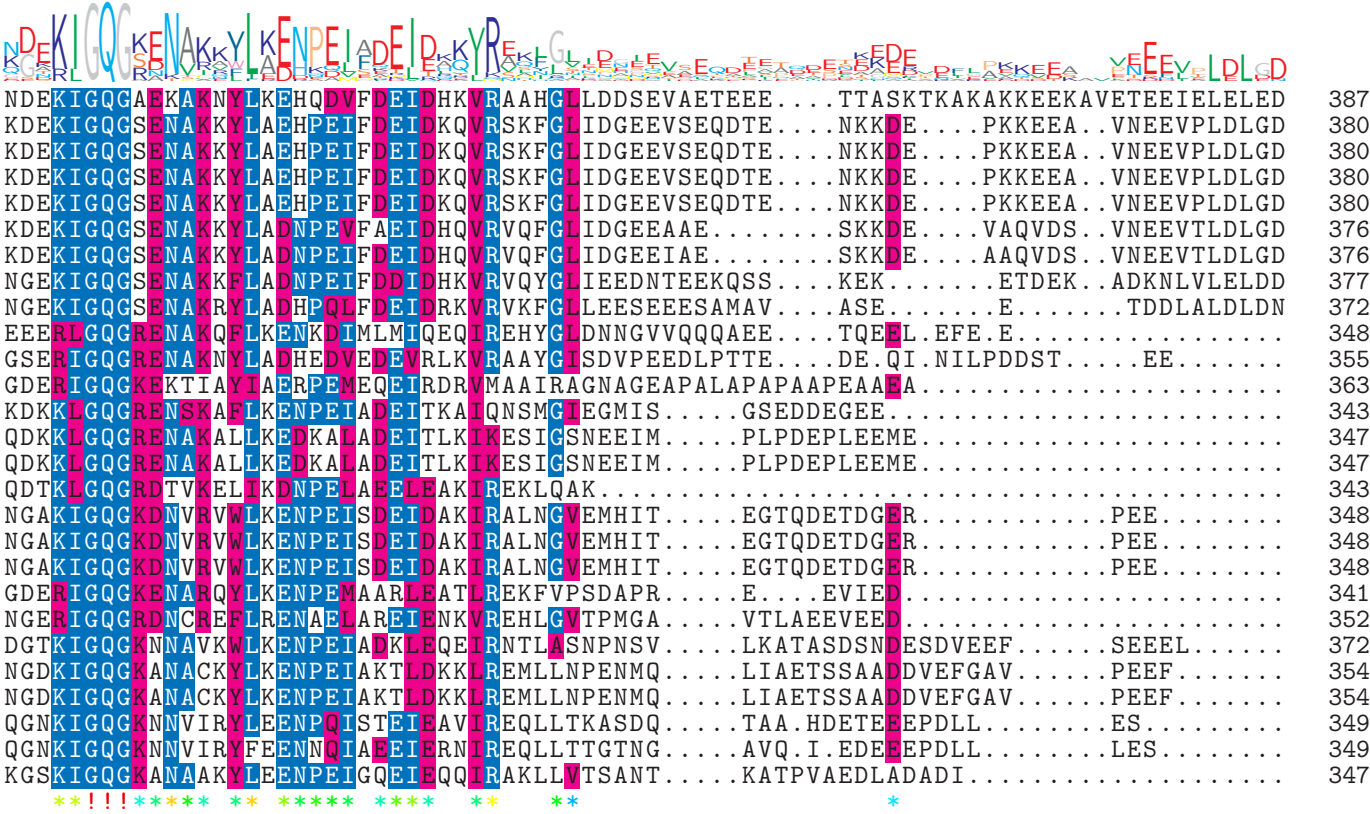


logo

NTDB id 600 KW2 RS01765 WP 011675413.1	ASVRLDVRGSTKIEEGS.GDNKTQIGKI	TKIKVVKNKVAPPFKVALVDIMFGEGISSTGELINIAVEEGI	TKKSGAWFAY	311
NTDB id 269 KZH43 RS08665 WP 001085462.1	ASVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKEAVVEIMYGEGISKTGELLKIASDLDI	TKKAGAWYSY	310
NTDB id 228 SPD RS09265 WP 001085462.1	ASVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKEAVVEIMYGEGISKTGELLKIASDLDI	TKKAGAWYSY	310
NTDB id 194 SPR RS08825 WP 001085462.1	ASVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKEAVVEIMYGEGISKTGELLKIASDLDI	TKKAGAWYSY	310
NTDB id 159 SP RS09750 WP 001085462.1	ASVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKEAVVEIMYGEGISKTGELLKIASDLDI	TKKAGAWYSY	310
NTDB id 527 SMSK321 RS11065 WP 001085454.1	ASVRLDVRGSTQIKGTG.DQKDTN	VGKETKIKVVKNKVAPPFKEAFVEIMYGEGISKTGELLKIASDLDI	TKKAGAWYSY	310
NTDB id 499 SM12261 RS08315 WP 078228268.1	ASVRLDVRGSTQIKGTG.DQKDTN	VGKETKIKVVKNKVAPPFKEAFVEIMYGEGISKTGELLKIASDLDI	TKKAGAWYSY	310
NTDB id 408 SMU RS09530 WP 002262392.1	SSVRLDVRGNTQIKGTG.EQKDSN	IGKETKIKVVKNKVAPPFKEAFVEITYGEGISRTGELVKIASDLGI	IQKAGAWYSY	310
NTDB id 453 Spy49 1753c ACI62003.1	ASVRLDVRGTTQIKGTG.DQKDSS	IGKETKIKVVKNKVAPPFKEAEVEIMYGEGISRTGELVKIASDLDI	IQKAGAWFSY	310
NTDB id 115 BSU 16940 NP 389576.2	SSVRLEVRRAEQLKQGN.....DVMGNKTKIKVVKNKVAPPFR	TAEVDIMYGEGISKEGEITIDLGTELDIVQKSGSWYSY		291
NTDB id 625 LCA RS02525 WP 011374196.1	STVRLEVRRAETIKNGT.....DMIGNRARIKVVKNKVAPPFKVAEVD	IMYGGISRTGELVDMAVEKDIINKSGSWYSY		293
NTDB id 1313 DR RS12030 WP 010888966.1	ASVRLDVRKIGQ....PTKVGND	AVANTVKKIKTVKNKVAAPFKEVELALVYGKGFQDLSDLVGLAADMDI	TKKAGSFYSY	306
NTDB id 1245 Cj1673c YP 002345041.1	ASVRLDVRKVVAT....L.KQNEEP	IGNRVKVKVVKNKVAPPFRQAEDVDMFGEGLSREGELIDYGVKLDIV	DKSGAWFSY	293
NTDB id 1214 NCTC11637 00359 SQJ03206.1	ASVRIDIRRIAA....L.KQNEQH	IGNRAKAKVVKNKVAPPFREAEFDIMFGEGISKEGEIIDYGVKLDIV	DKSGAWLSY	295
NTDB id 1211 C694 RS00795 WP 000963128.1	ASVRIDIRRIAS....L.KQNEQH	IGNRAKAKVVKNKVAPPFREAEFDIMFGEGISKEGEIIDYGVKLDIV	DKSGAWLSY	295
NTDB id 1334 RAOC RS04870 WP 004918236.1	ASVRIDIRRLSDTGKIKDKSGEV	IGNRTKVKKVVKNKVAPPFKSAEFDIMYGEGVSKVGEILDVATDLDI	IQKSGSWFSY	306
NTDB id 1130 NGFG RS03960 WP 003688695.1	SSVRLDIRRTGS....I.KKGEVL	GNETRVKVIKNKVAPPFRQAEDILYGEGISWEGELIDIGVKNDI	INKSGAWYSY	293
NTDB id 1124 NGFG RS03960 WP 003688695.1	SSVRLDIRRTGS....I.KKGEVL	GNETRVKVIKNKVAPPFRQAEDILYGEGISWEGELIDIGVKNDI	INKSGAWYSY	293
NTDB id 1123 OK783 RS03845 WP 003688695.1	SSVRLDIRRTGS....I.KKGEVL	GNETRVKVIKNKVAPPFRQAEDILYGEGISWEGELIDIGVKNDI	INKSGAWYSY	293
NTDB id 669216 IEQ11 RS09110 WP 036111514.1	ASVRLDIRRIGA....I.KKGEI	IGNQTKIKVVKNKLAPPFKQVVEILYGEGISREGELIDMGVEAKL	VEKSGAWYSC	294
NTDB id 1427 RS RS02760 WP 011000510.1	ASVRLDIRRIGS....I.KKGEV	GNETKVKKVVKNKVAPPFREAIFDILYGAGVSREGEITIDLGVEAKV	VEKSGAWYSY	301
NTDB id 1389 A4U84 RS07560 WP 021112712.1	ASVRLDIRRCGV....V.KDGDEI	IGSETKVKKVVKNKVAPPFREVFQDIMYGEGISRMNELLILAEANGFI	KKSGAWFSY	309
NTDB id 1165 A1552VC RS01565 WP 000344154.1	ASVRLDIRRTGA....I.KEGEV	GNETRIKVVKNKIAAPFKEANTQIMYGGGFNREGELIDLGVKHKM	VEKSGAWYSY	292
NTDB id 1142 GTF74 RS11550 WP 000344154.1	ASVRLDIRRTGA....I.KEGEV	GNETRIKVVKNKIAAPFKEANTQIMYGGGFNREGELIDLGVKHKM	VEKSGAWYSY	292
NTDB id 1022 ACIAD RS06390 WP 004925639.1	ASVRLDIRRIGQ....V.KEGDEI	IGSETKVKKVVKNKMAPPFREAIQILYGKGVNQLGELVDLAVQQN	IVQKAGAWYSY	292
NTDB id 1074 ABD1 RS10195 WP 000344167.1	ASVRLDIRRIGQ....V.KEGDEI	VGSETKVKKVVKNKMAPPFKEAIFQILYGKGTNQLGELVDLAVQQD	IVQKAGAWYSY	292
NTDB id 1205 PSJM300 05545 AFN77183.1	ASVRLDIRRTGA....V.KEGDEV	VGSETRVKVVKNKVAPPFRQAEDQILYGKGIYRNGEITIDLGVQQGL	VEKSGAWYAY	292
consensus	*!!**!* * ** *****!*****!***** * *****!*****			

logo

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 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 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
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 669216 IEQ11 RS09110 WP 036111514.1
NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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 527 SMSK321 RS11065 WP 001085454.1	ELEIEIEE		384
NTDB id 499 SM12261 RS08315 WP 078228268.1	ELEIEIEE		384
NTDB id 408 SMU RS09530 WP 002262392.1	TIELED..		383
NTDB id 453 Spy49 1753c ACI62003.1	GIEIED..		378
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 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 669216 IEQ11 RS09110 WP 036111514.1			341
NTDB id 1427 RS RS02760 WP 011000510.1			352
NTDB id 1389 A4U84 RS07560 WP 021112712.1			372
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