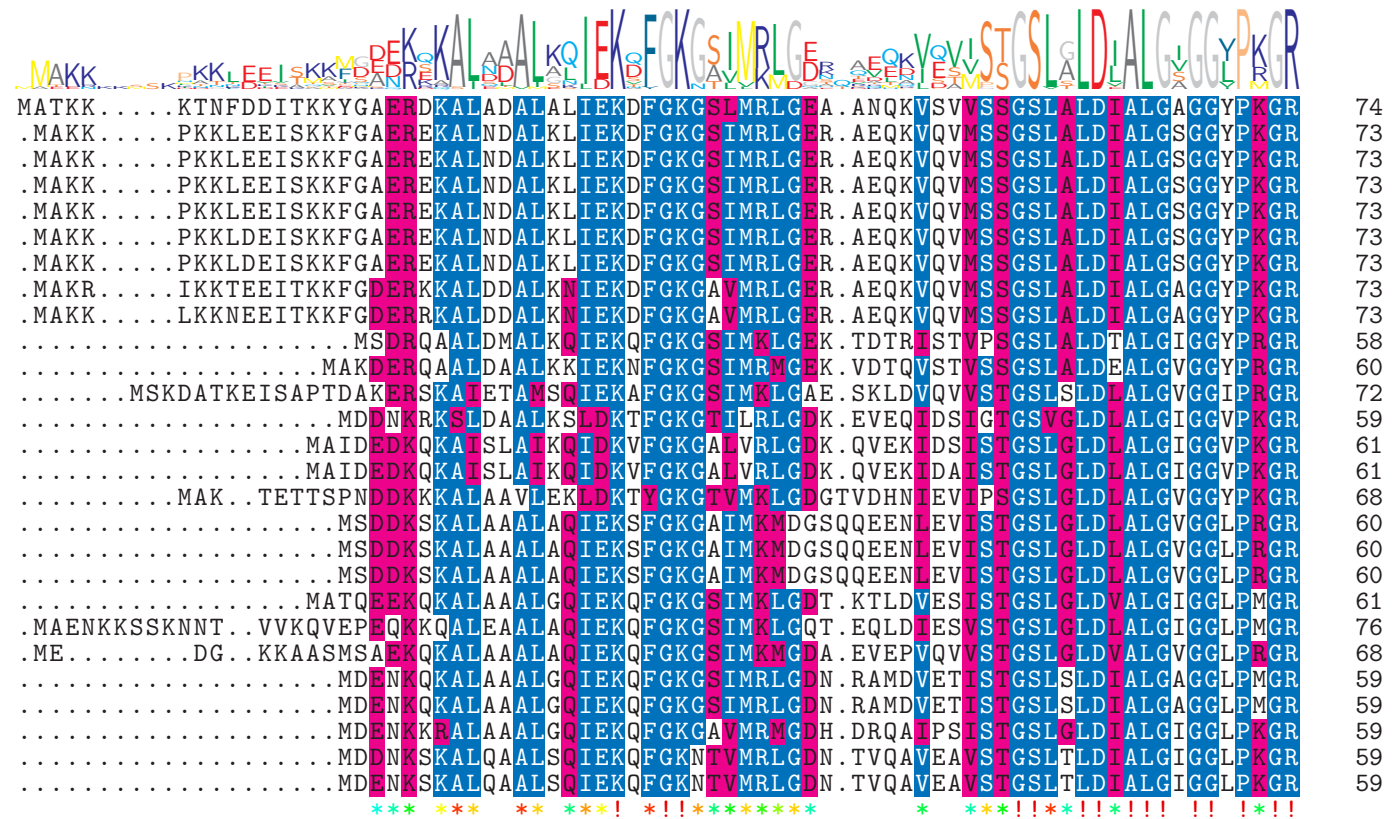


```

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 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 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 123962 C645 RS03850 WP 005654959.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

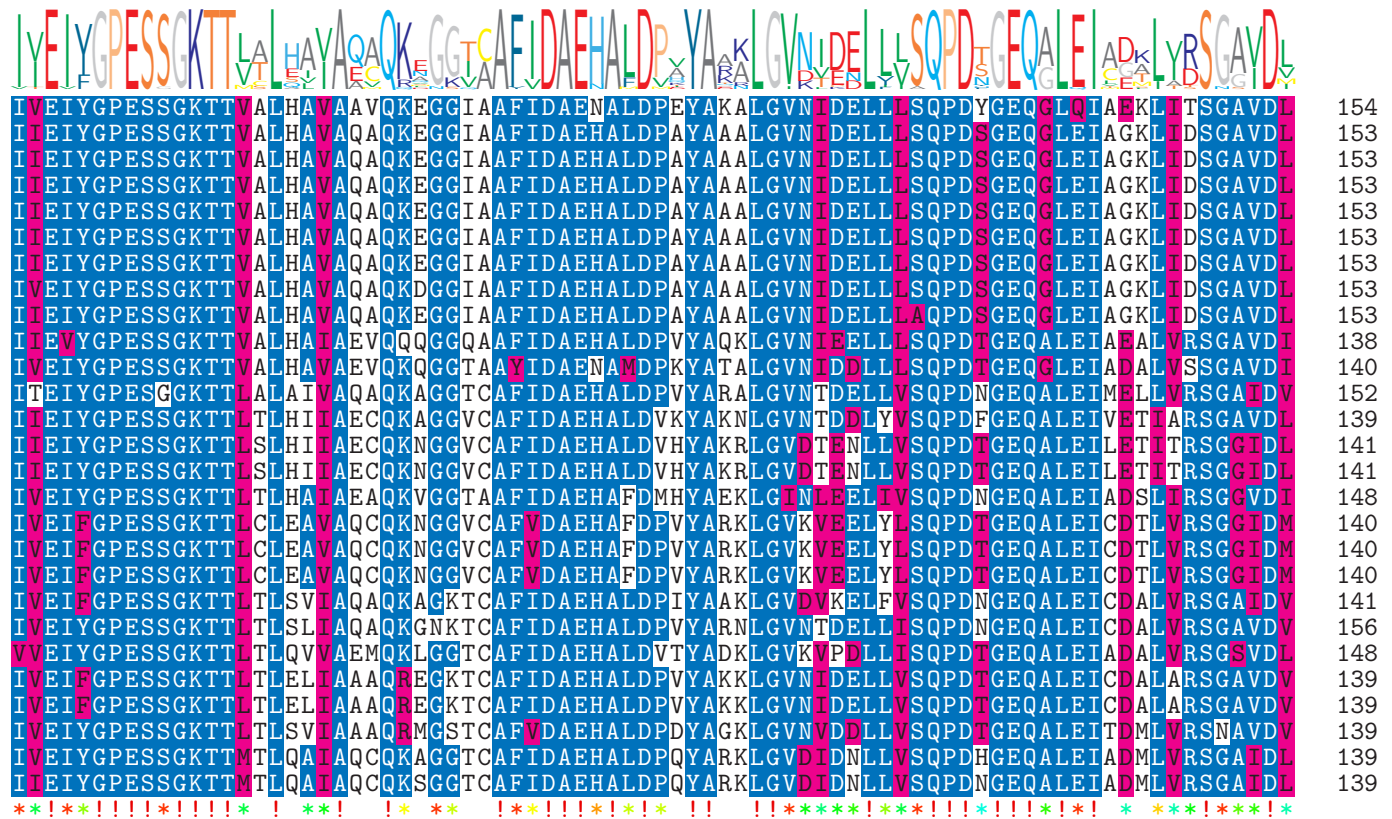
```



```

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 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 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 123962 C645 RS03850 WP 005654959.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

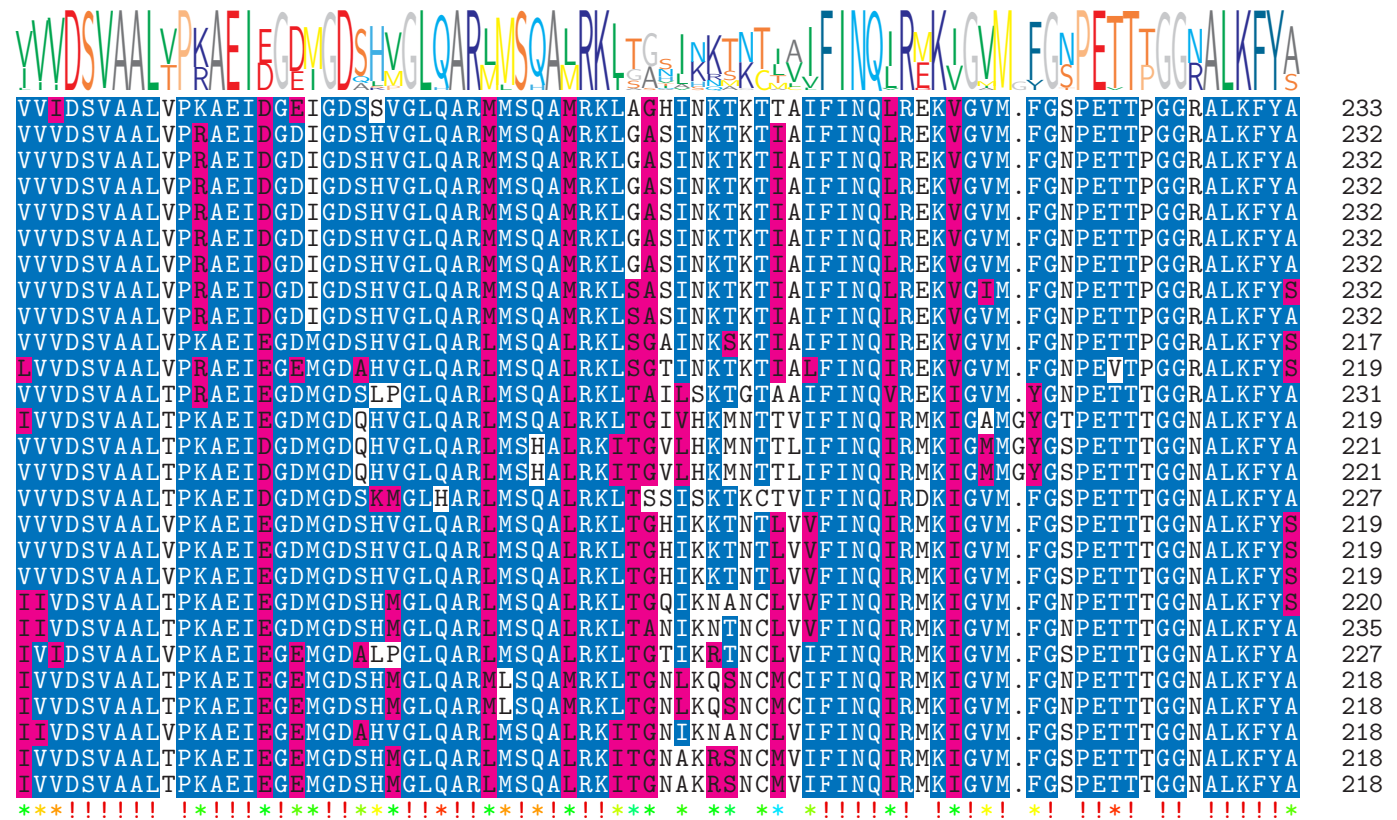
```



```

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 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 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 123962 C645 RS03850 WP 005654959.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

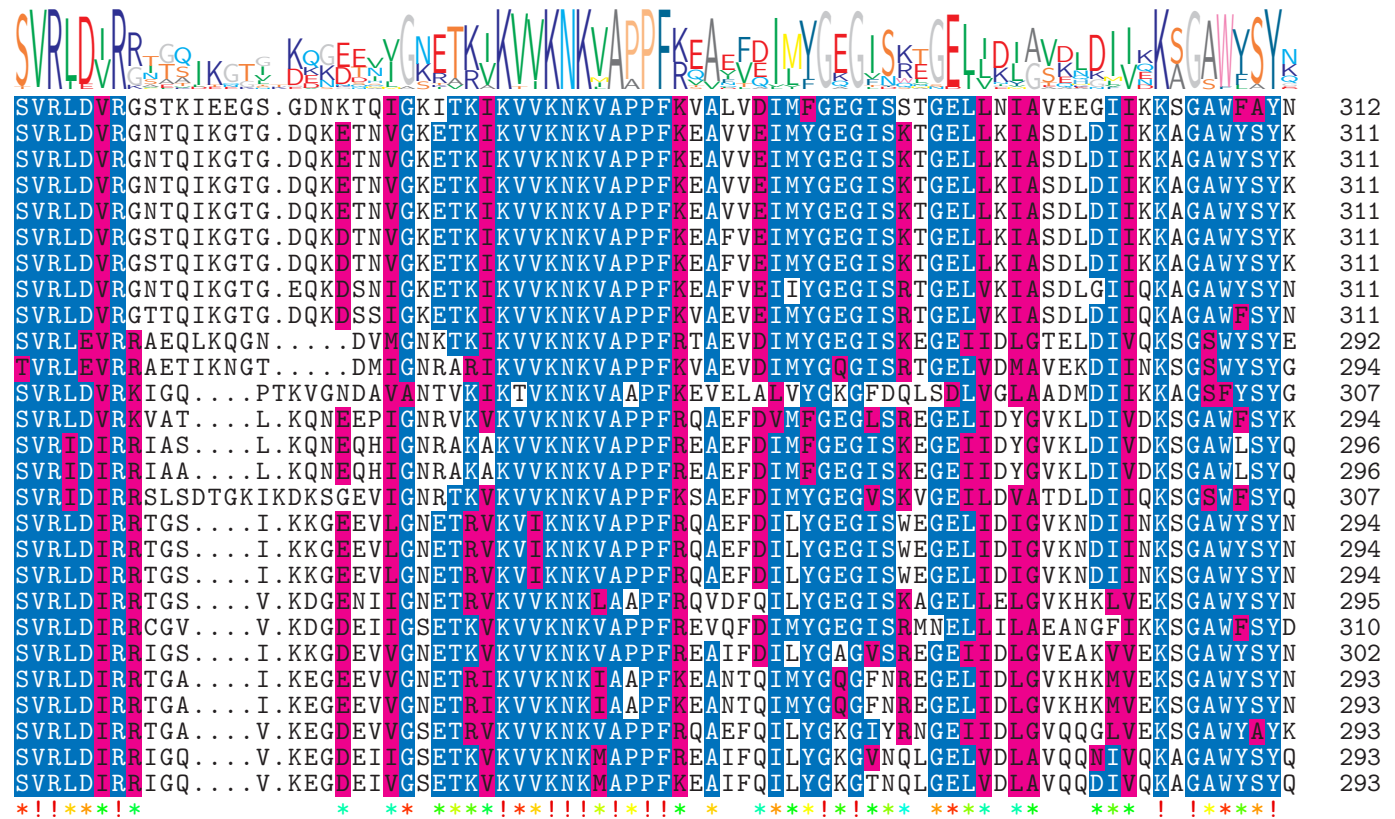
```



```

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 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 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 123962 C645 RS03850 WP 005654959.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
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 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 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 123962 C645 RS03850 WP 005654959.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

```

Sequence	Score
DEKIGGGA ⁺ E ⁺ KA ⁺ KN ⁺ YL ⁺ KE ⁺ HQ ⁺ DV ⁺ FDEI ⁺ DHKV ⁺ RAAH ⁺ CI ⁺ LDDSEVAETE.EETTASKTKAKAKKEEKAVETEEIELELED....	387
DEKIGQGS ⁺ ENAK ⁺ KYLA ⁺ EHPEI ⁺ FDEI ⁺ DKV ⁺ RSKF ⁺ CLIDGEEVSEQD.TENKKDE....PKKEEA..VNEEVPLDLGDELEI	384
DEKIGQGS ⁺ ENAK ⁺ KYLA ⁺ EHPEI ⁺ FDEI ⁺ DKV ⁺ RSKF ⁺ CLIDGEEVSEQD.TENKKDE....PKKEEA..VNEEVPLDLGDELEI	384
DEKIGQGS ⁺ ENAK ⁺ KYLA ⁺ EHPEI ⁺ FDEI ⁺ DKV ⁺ RSKF ⁺ CLIDGEEVSEQD.TENKKDE....PKKEEA..VNEEVPLDLGDELEI	384
DEKIGQGS ⁺ ENAK ⁺ KYLA ⁺ EHPEI ⁺ FDEI ⁺ DH ⁺ QV ⁺ RVQF ⁺ CLIDGEEIAES....KKDE....AAQVDS..VNEEVPLDLGDELEI	380
DEKIGQGS ⁺ ENAK ⁺ KYLAD ⁺ NPEI ⁺ VFAEI ⁺ DH ⁺ QV ⁺ RVQF ⁺ CLIDGEEAAES....KKDE....VAQVDS..VNEEVPLDLGDELEI	380
GEKIGQGS ⁺ ENAK ⁺ KFLAD ⁺ NPEI ⁺ FDDI ⁺ DHKV ⁺ RVQY ⁺ CLIEDNTTEEKQ.SSKEK.....ETDEK..ADKNLVLEDDTIEL	381
GEKIGQGS ⁺ ENAK ⁺ KRYLAD ⁺ HQP ⁺ LFDEI ⁺ DRKV ⁺ RVKF ⁺ CLLEESEEEESAM.AVASE.....E.....TDDLALDLNGLIEI	376
EERL ⁺ GGGREN ⁺ AKQFL ⁺ KEN ⁺ KD ⁺ IMLM ⁺ IQEQ ⁺ IREHY ⁺ CLDNNGVVQQQA.EETQEEL.EFE.E.....	348
SERIGQGR ⁺ ENAK ⁺ NYLAD ⁺ HED ⁺ VEDEV ⁺ RLKV ⁺ RAAY ⁺ CI ⁺ SDVPEEDLPT.TEDE.QI.NILPDDST....EE.....	355
DERIGGQ ⁺ KEKTI ⁺ AYIA ⁺ ERPE ⁺ MEQE ⁺ IRDRV ⁺ MAATRAGNAGEAPALAPAPAAPEAAEA.....	363
DKKL ⁺ GGGREN ⁺ SKA ⁺ FLKEN ⁺ PEI ⁺ DEIT ⁺ KA ⁺ TQNSM ⁺ CI ⁺ EGMISGS..EDDEGE..E.....	343
DKKL ⁺ GGGREN ⁺ AKALL ⁺ KED ⁺ KALADEI ⁺ TLK ⁺ IKES ⁺ IGS ⁺ NEEIMPL..PDEPLE..EME.....	347
DKKL ⁺ GGGREN ⁺ AKALL ⁺ KED ⁺ KALADEI ⁺ TLK ⁺ IKES ⁺ IGS ⁺ NEEIMPL..PDEPLE..EME.....	347
DTKL ⁺ GGGRD ⁺ TVKEL ⁺ IKDN ⁺ PELA ⁺ ELE ⁺ EAKI ⁺ REKLQAK.....	343
GAKIGQGG ⁺ KDNVR ⁺ VWLKEN ⁺ PEIS ⁺ DEID ⁺ AKI ⁺ RALN ⁺ GVEMHITEG..T...QD...ETDGE.RPEE.....	348
GAKIGQGG ⁺ KDNVR ⁺ VWLKEN ⁺ PEIS ⁺ DEID ⁺ AKI ⁺ RALN ⁺ GVEMHITEG..T...QD...ETDGE.RPEE.....	348
GAKIGQGG ⁺ KDNVR ⁺ VWLKEN ⁺ PEIS ⁺ DEID ⁺ AKI ⁺ RALN ⁺ GVEMHITEG..T...QD...ETDGE.RPEE.....	348
GEKIGQGG ⁺ KANS ⁺ MKWL ⁺ NEN ⁺ IEKS ⁺ DELE ⁺ ARL ⁺ RAEL ⁺ VANPEQALM..ADIEQSENNTESSEDFE.....EEL.....	354
GTKIGQGG ⁺ KNNAV ⁺ KWLKEN ⁺ PEI ⁺ AD ⁺ KL ⁺ EQEI ⁺ RNTLA ⁺ SNPNSVLK..ATASDSND ⁺ ESDVE.EFSE.....EEL.....	372
GERIGQGRD ⁺ NCREF ⁺ LREN ⁺ AE ⁺ LARE ⁺ IKN ⁺ KV ⁺ REHL ⁺ GV ⁺ TPMGAV...TLAEEVEED.....	352
GDKIGQGG ⁺ KANACK ⁺ YLKEN ⁺ PEI ⁺ AK ⁺ TL ⁺ DKKL ⁺ REMLLN ⁺ PENMQLI..AETSSAAD ⁺ VEFGAVPE.....EF.....	354
GDKIGQGG ⁺ KANACK ⁺ YLKEN ⁺ PEI ⁺ AK ⁺ TL ⁺ DKKL ⁺ REMLLN ⁺ PENMQLI..AETSSAAD ⁺ VEFGAVPE.....EF.....	354
GSKIGQGG ⁺ KANA ⁺ AKY ⁺ LEEN ⁺ PEI ⁺ GQ ⁺ EIE ⁺ QQI ⁺ IRAKLL ⁺ TSANTKA..TPVAEDLADADI.....	347
GNKIGQGG ⁺ KNNVIR ⁺ YLEEN ⁺ PEI ⁺ GISTE ⁺ IE ⁺ AVI ⁺ REQLLT ⁺ TKASDQTA..A.HDETEEE ⁺ PDLL..ES.....	349
GNKIGQGG ⁺ KNNVIR ⁺ YLEEN ⁺ PEI ⁺ GISTE ⁺ IE ⁺ AVI ⁺ REQLLT ⁺ GTNGAV..Q.I.EDEEE ⁺ PDLL..LE.....S.....	349

logo

				E.I.E.E	
NTDB	id	600	KW2 RS01765 WP 011675413.1	....	387
NTDB	id	269	KZH43 RS08665 WP 001085462.1	EIEE	388
NTDB	id	228	SPD RS09265 WP 001085462.1	EIEE	388
NTDB	id	194	SPR RS08825 WP 001085462.1	EIEE	388
NTDB	id	159	SP RS09750 WP 001085462.1	EIEE	388
NTDB	id	499	SM12261 RS08315 WP 078228268.1	EIEE	384
NTDB	id	527	SMSK321 RS11065 WP 001085454.1	EIEE	384
NTDB	id	408	SMU RS09530 WP 002262392.1	ED..	383
NTDB	id	453	Spy49 1753c ACI62003.1	ED..	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	1211	C694 RS00795 WP 000963128.1	....	347
NTDB	id	1214	NCTC11637 00359 SQJ03206.1	....	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	123962	C645 RS03850 WP 005654959.1	....	354
NTDB	id	1389	A4U84 RS07560 WP 021112712.1	....	372
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	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