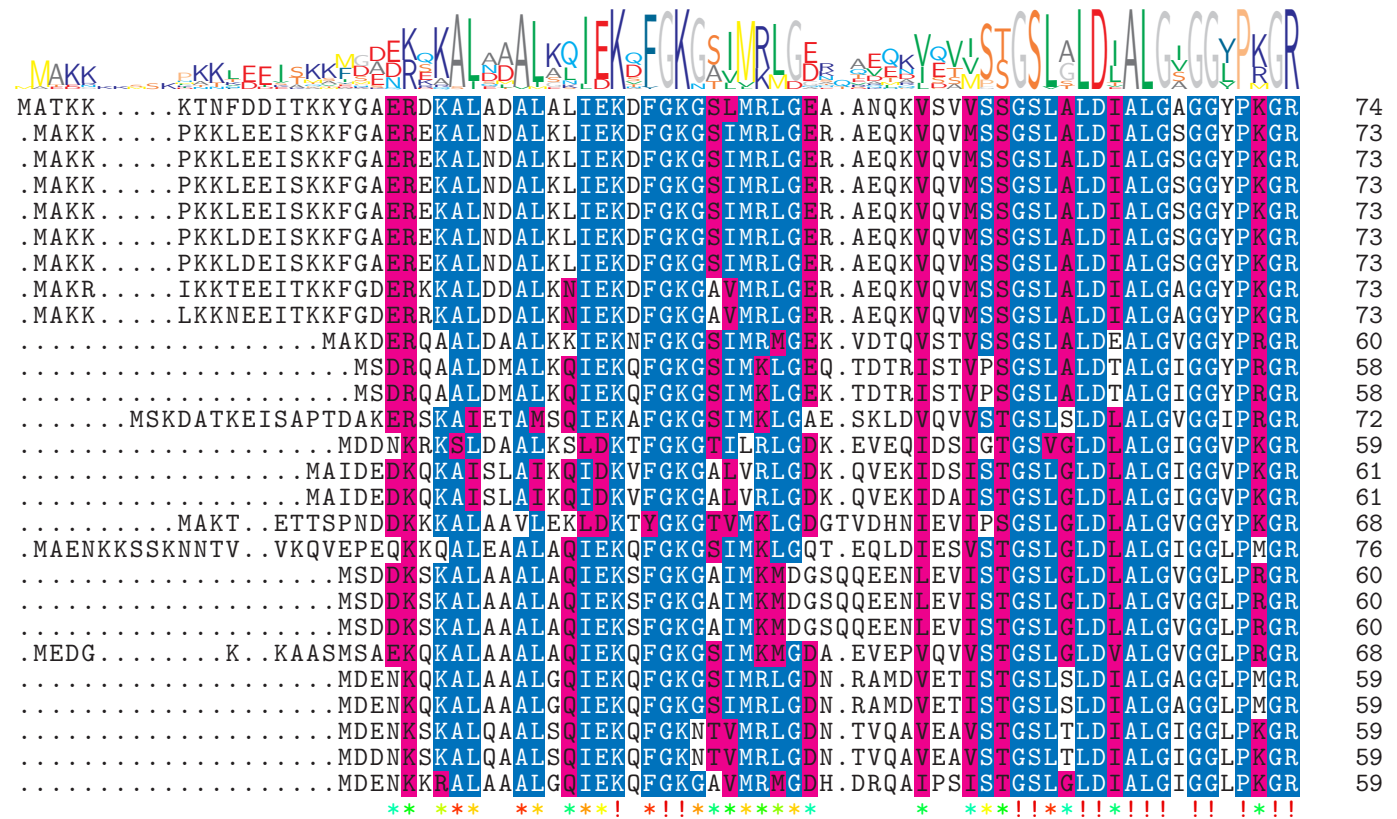


```

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 625 LCA RS02525 WP 011374196.1
NTDB id 986924 MHB67 RS08245 WP 024424111.1
NTDB id 115 BSU 16940 NP 389576.2
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 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 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

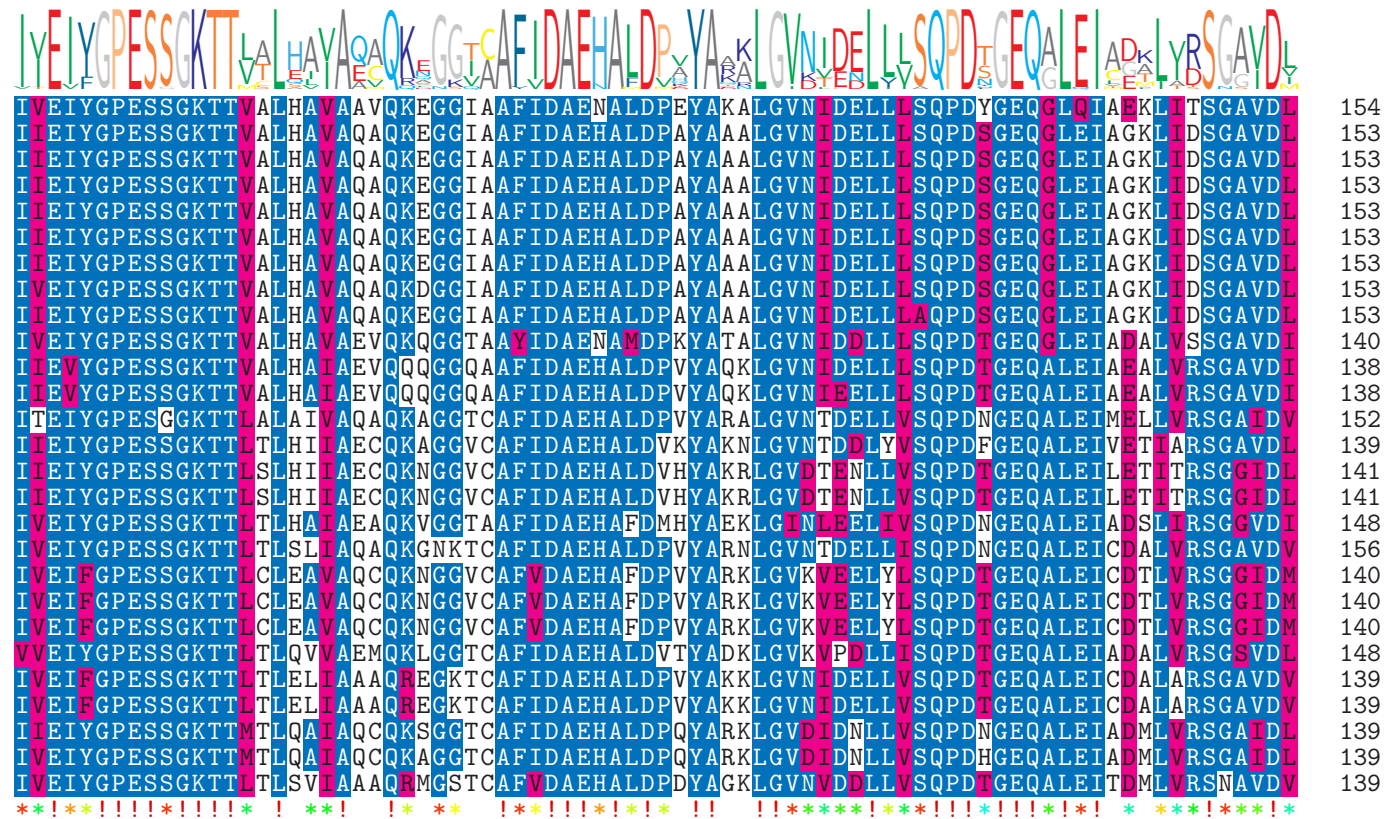
```



```

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 625 LCA RS02525 WP 011374196.1
NTDB id 986924 MHB67 RS08245 WP 024424111.1
NTDB id 115 BSU 16940 NP 389576.2
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 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 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

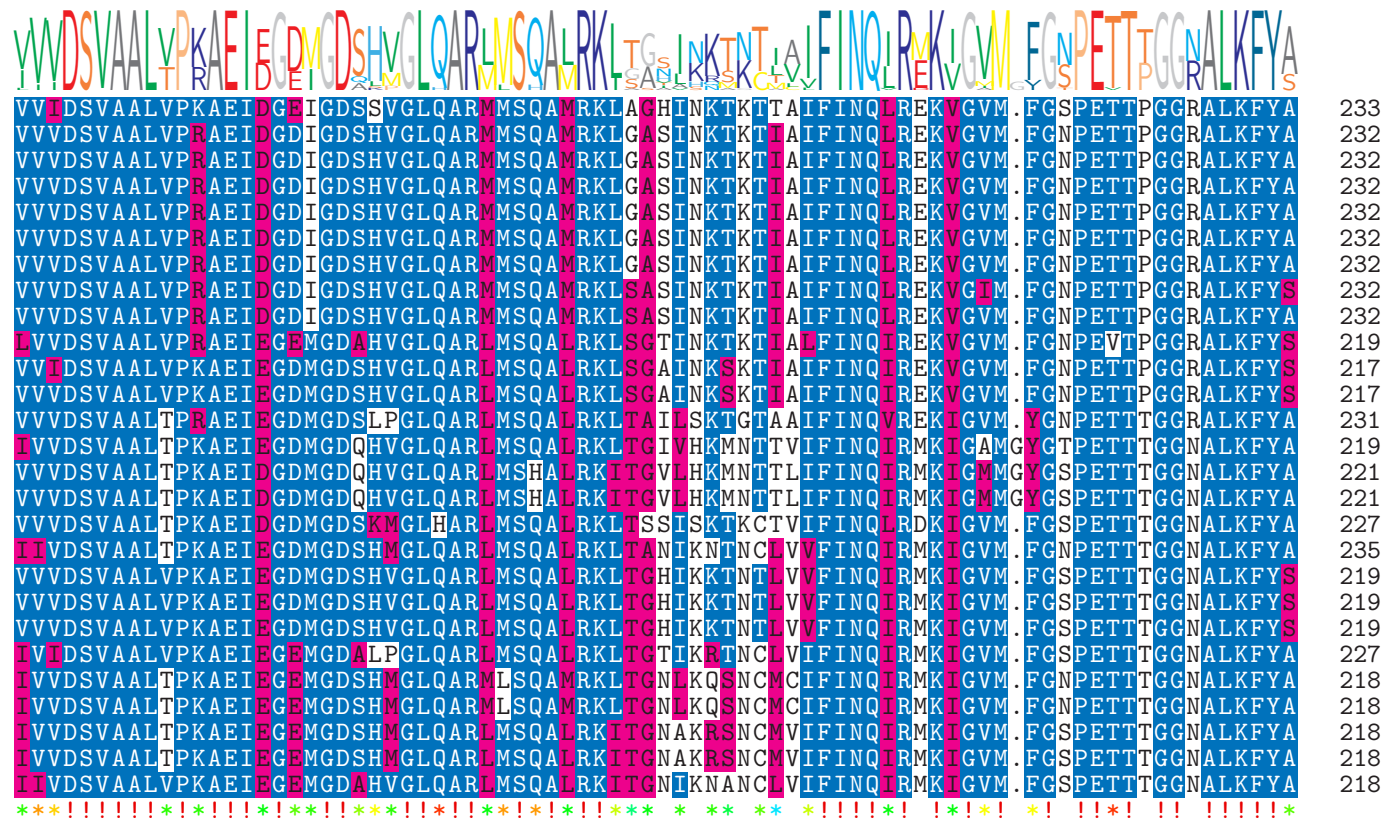
```



```

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 625 LCA RS02525 WP 011374196.1
NTDB id 986924 MHB67 RS08245 WP 024424111.1
NTDB id 115 BSU 16940 NP 389576.2
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 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 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

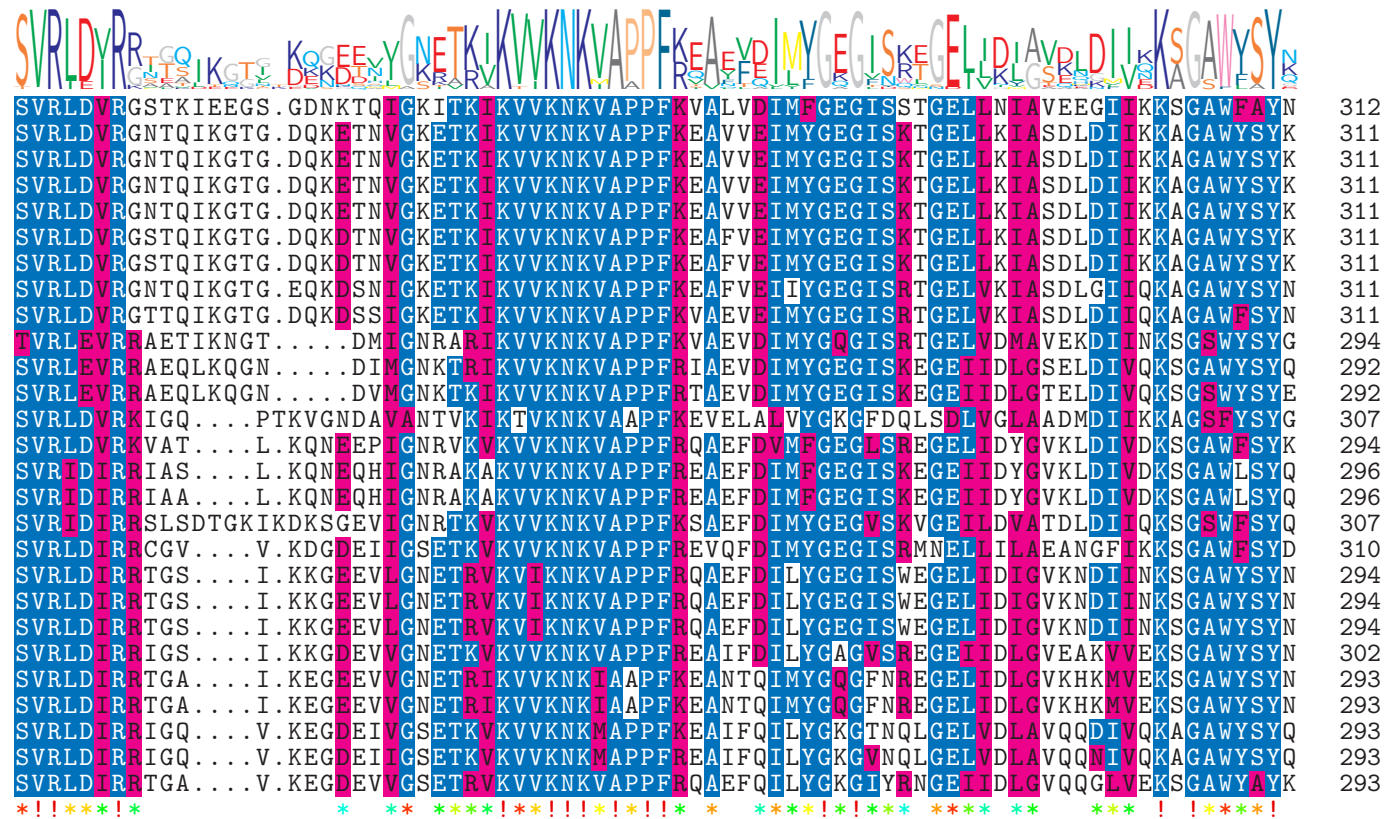
```



```

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 625 LCA RS02525 WP 011374196.1
NTDB id 986924 MHB67 RS08245 WP 024424111.1
NTDB id 115 BSU 16940 NP 389576.2
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 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 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

```



logo

NTDB id 600 KW2 RS01765 WP 011675413.1	DEKIGQGA	EKAKNYLKEHQDV	DEIDHKVRAAHG	LDDSEVAETEEETT	ASKTKAKAKKEEK	AVETEEIELELED		387
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	.VNEEVPLDLGDE	LEIE	385
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	.VNEEVPLDLGDE	LEIE	385
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	.VNEEVPLDLGDE	LEIE	385
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	.VNEEVPLDLGDE	LEIE	385
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLADNPEV	FAEIDHQVRVQFGL	IDGEEAAE....SK	KDE....VAQVDS	.VNEEVTLDLGDE	LEIE	381
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLADNPEIF	DEIDHQVRVQFGL	IDGEEIAE....SK	KDE....AAQVDS	.VNEEVTLDLGDE	LEIE	381
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVVRVQYGL	IEEDNTEEKQSSKE	ETDEK	.ADKNLVLELDDT	IELE	382
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEEEESAMAV	ASE.....E.....	TDDLALDLDNGIE	IEIE	377
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQG	RENAKKNYLADHED	VEDEVRLKVRAAYG	ISDVPEEDLPTTED	.EQIN.....	ILPDDSTEE.		355
NTDB id 986924 MHB67 RS08245 WP 024424111.1	EERLGQG	RENAKQFLKENKDI	MLMIQEQIREHYGL	DNNGTVQQESEEA	LE.....	LE.....		347
NTDB id 115 BSU 16940 NP 389576.2	EERLGQG	RENAKQFLKENKDI	MLMIQEQIREHYGL	DNNGVVQQAAET	QEELE.....	FEE.....		348
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQG	KEKTIAYIAERP	EMEQEIRDRVMAA	IRAGNAGEAPALAP	APAAPEAAEA.....			363
NTDB id 1245 Cj1673c YP 002345041.1	DKKLGQG	RENSKAFLENPEIA	DEITKAIQNSMG	IEGMI....SGSE	DE..GEE.....			343
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKLGQG	RENAKALLKEDKA	LADAITLKIKESIG	SNEEI....MPLP	DEP..LEEME.....			347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKLGQG	RENAKALLKEDKA	LADAITLKIKESIG	SNEEI....MPLP	DEP..LEEME.....			347
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKLGQG	RDTVKELIKDNPE	LAELEAKIREKLQ	AK.....				343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQG	KNNAVKWLKENPE	IADKLEQEIRNTLA	SNPNS....VLKA	TASDSNDESD..VE	EFSSEEL.....		372
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPE	ISDEIDAKIRALNG	VEMHI....TEGT	QDETD.....GER	PEE.....		348
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPE	ISDEIDAKIRALNG	VEMHI....TEGT	QDETD.....GER	PEE.....		348
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQG	KDNVRVWLKENPE	ISDEIDAKIRALNG	VEMHI....TEGT	QDETD.....GER	PEE.....		348
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQG	RDNCREFLRENAEL	AREIENKVREHLG	VTPMG....AV.TL	AEEVEED.....			352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQG	KANACKYLLKENPE	IAKTLDDKKLREML	LNPNM....QLIA	ETSSAADDVE..FG	AVPEEF.....		354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQG	KANACKYLLKENPE	IAKTLDDKKLREML	LNPNM....QLIA	ETSSAADDVE..FG	AVPEEF.....		354
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQG	KNNVIRYFEENNQ	IAEEIERNIREQLLT	TGTN....GAVQ.I	.EDEEEPD....LL	LES.....		349
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQG	KNNVIRYLEENPQ	ISTEIEAVIREQLLT	TKASD....QTAA	.HDETEEEP....L	LES.....		349
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQG	KANAACKYLEENPE	IGQIEEQIRAKLLV	TSAN....TKATP	VAAEDLADAD....I			347
consensus	***!!!	*****	**	*****	*****	**	**	

logo

		IEE	
NTDB id 600 KW2 RS01765 WP 011675413.1	...		387
NTDB id 269 KZH43 RS08665 WP 001085462.1	IEE		388
NTDB id 228 SPD RS09265 WP 001085462.1	IEE		388
NTDB id 194 SPR RS08825 WP 001085462.1	IEE		388
NTDB id 159 SP RS09750 WP 001085462.1	IEE		388
NTDB id 527 SMSK321 RS11065 WP 001085454.1	IEE		384
NTDB id 499 SM12261 RS08315 WP 078228268.1	IEE		384
NTDB id 408 SMU RS09530 WP 002262392.1	D..		383
NTDB id 453 Spy49 1753c ACI62003.1	D..		378
NTDB id 625 LCA RS02525 WP 011374196.1	...		355
NTDB id 986924 MHB67 RS08245 WP 024424111.1	...		347
NTDB id 115 BSU 16940 NP 389576.2	...		348
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 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 1074 ABD1 RS10195 WP 000344167.1	...		349
NTDB id 1022 ACIAD RS06390 WP 004925639.1	...		349
NTDB id 1205 PSJM300 05545 AFN77183.1	...		347
consensus			

-  non conserved
-  similar
-  ≥ 50% conserved