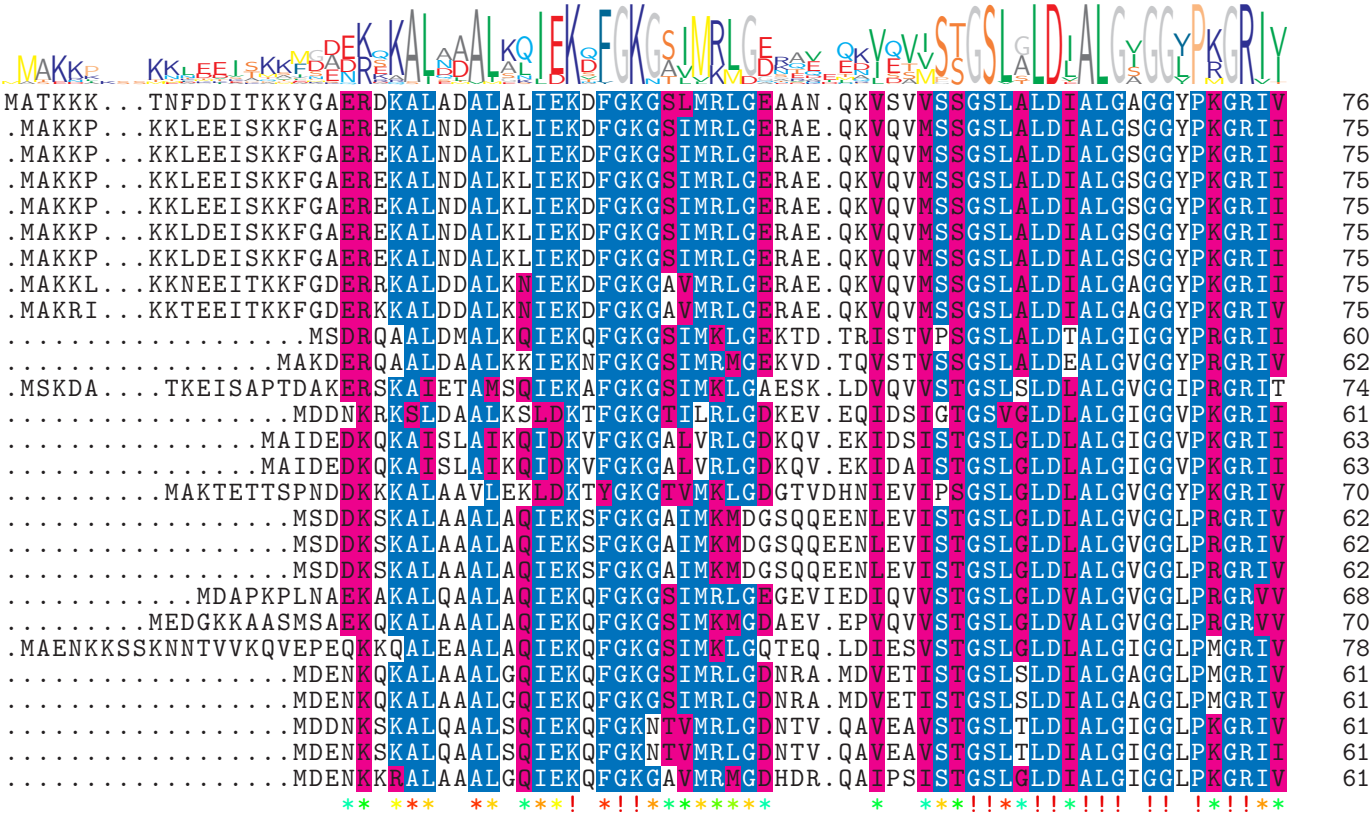


logo

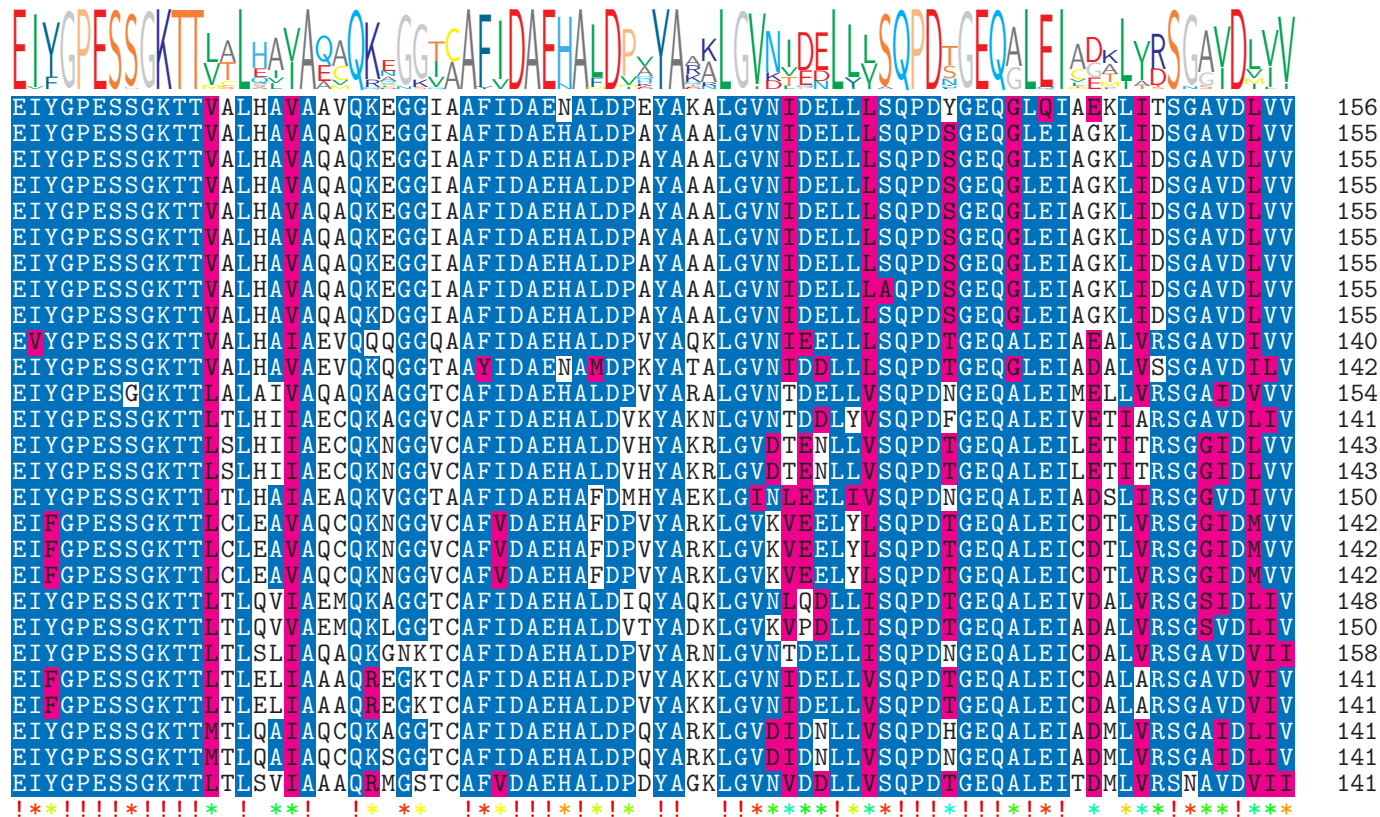
NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 453 Spy49 1753c 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 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 44745 RGE RS22735 WP 014430841.1
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



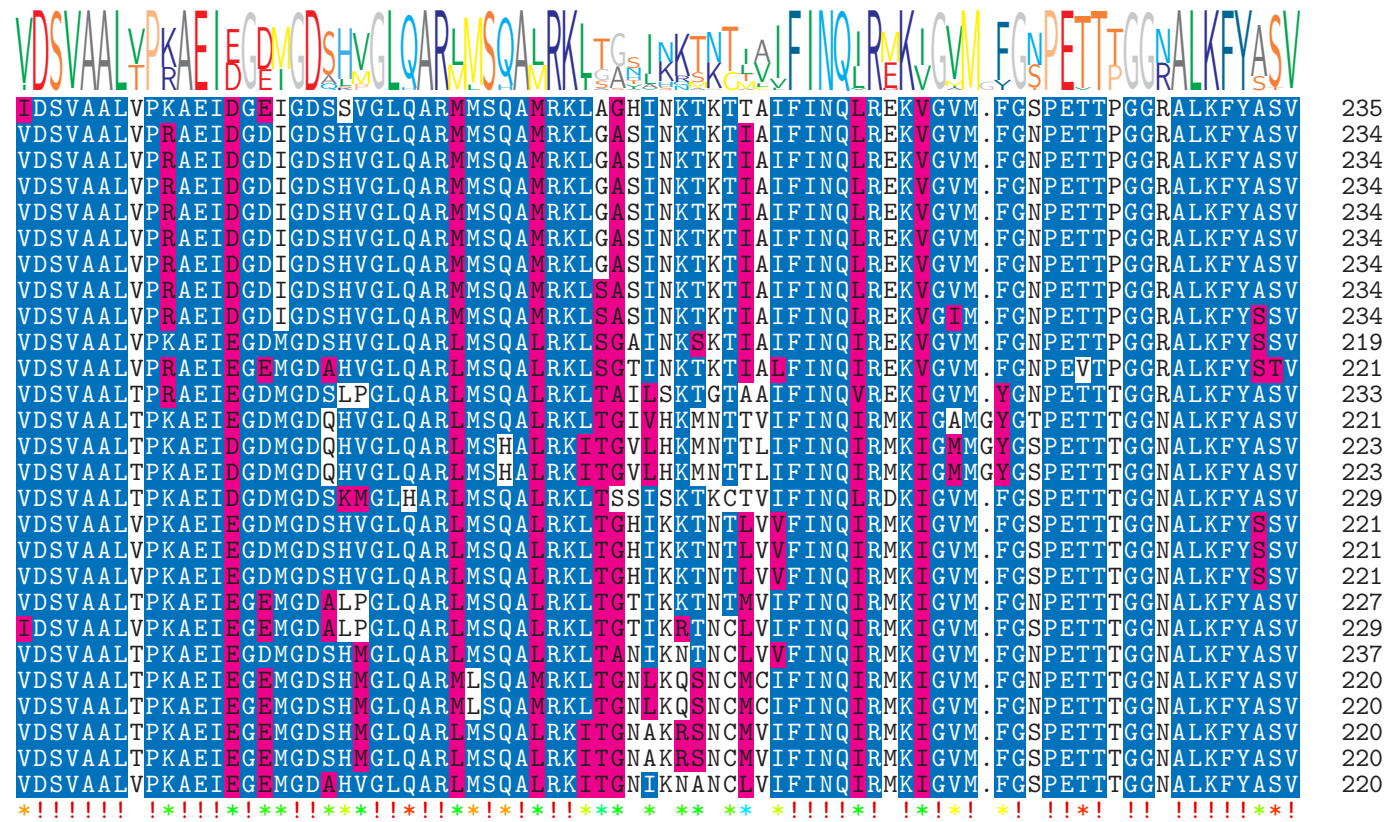
```

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 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 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 44745 RGE RS22735 WP 014430841.1
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

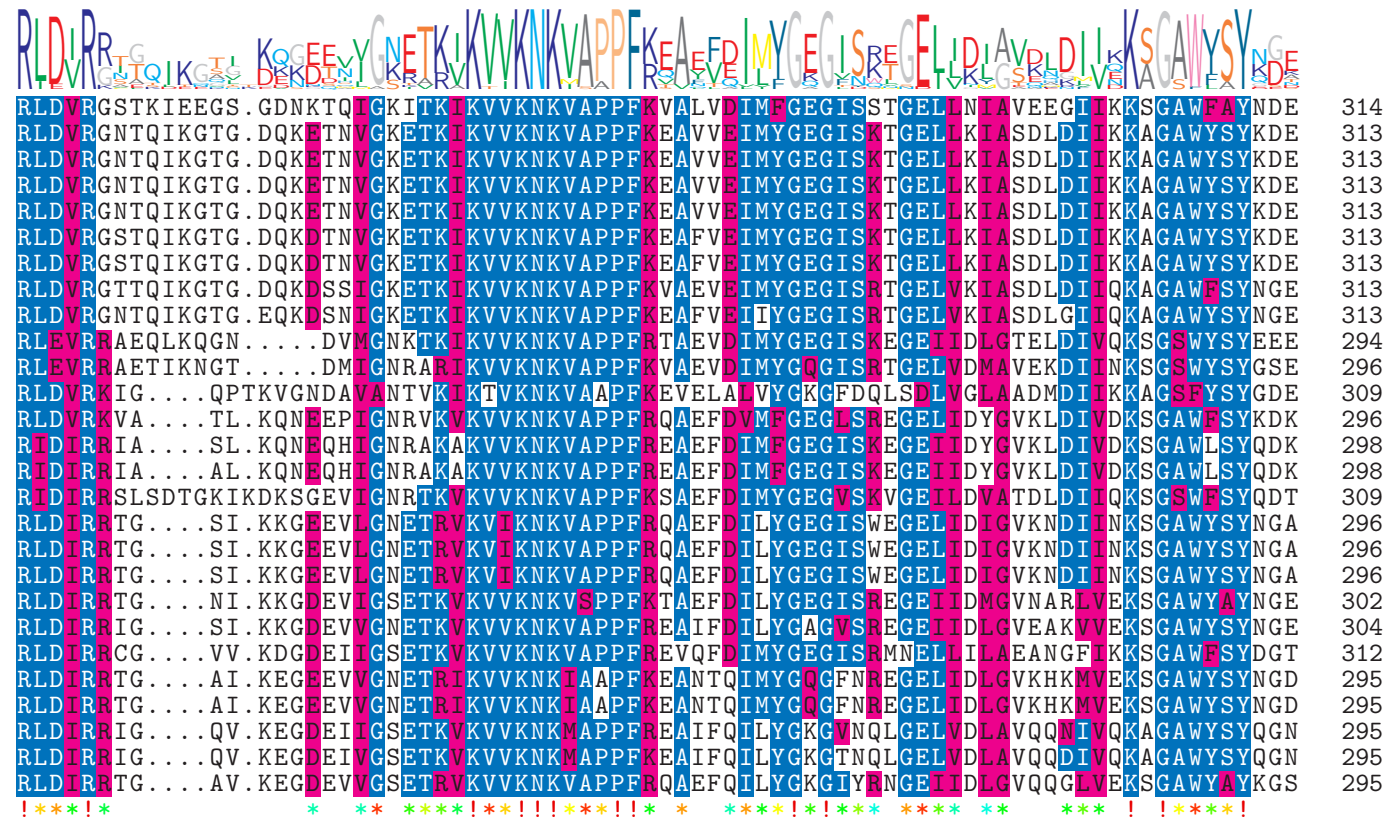
```



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 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 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 44745 RGE RS22735 WP 014430841.1
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 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 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 44745 RGE RS22735 WP 014430841.1
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	KIGQGA	EKAKNYLKEHQDV	DEIDHKVRAAHGL	LDDSEVAETEEETT	ASKTKAKAKKEEK	AVETEEIELELED		387
NTDB id 269 KZH43 RS08665 WP 001085462.1	KIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENK	KDE....PKKEEA	..VNEEVPLDLGDE	LEIEIE	387
NTDB id 228 SPD RS09265 WP 001085462.1	KIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENK	KDE....PKKEEA	..VNEEVPLDLGDE	LEIEIE	387
NTDB id 194 SPR RS08825 WP 001085462.1	KIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENK	KDE....PKKEEA	..VNEEVPLDLGDE	LEIEIE	387
NTDB id 159 SP RS09750 WP 001085462.1	KIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENK	KDE....PKKEEA	..VNEEVPLDLGDE	LEIEIE	387
NTDB id 527 SMSK321 RS11065 WP 001085454.1	KIGQGS	ENAKKYLADNPEVFA	EIDHQRVVRVQFGL	IDGEEAAE....SK	KDE....VAQVDS	..VNEEVTLDLGDE	LEIEIE	383
NTDB id 499 SM12261 RS08315 WP 078228268.1	KIGQGS	ENAKKYLADNPEIF	DEIDHQRVVRVQFGL	IDGEEIAE....SK	KDE....AAQVDS	..VNEEVTLDLGDE	LEIEIE	383
NTDB id 453 Spy49 1753c ACI62003.1	KIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEESAMAVASE	E.....	TDDLALDLDN	GIEIED	378
NTDB id 408 SMU RS09530 WP 002262392.1	KIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEEDNTEEKQSSKE	K.....ETDEK	..ADKNLVLELDD	TIELED	383
NTDB id 115 BSU 16940 NP 389576.2	RLGQGR	ENAKQFLKENKDIM	LMIQEQIREHYGL	DNNGVVQQAEETQ	EEL.EFE.E.....			348
NTDB id 625 LCA RS02525 WP 011374196.1	RIGQGR	ENAKNYLADHEDVE	DEVRLKVRAAYGIS	SDVPEEDLPTTEDE	.QI.NILPDDST	EE.....		355
NTDB id 1313 DR RS12030 WP 010888966.1	RIGQGK	EKTIAIYTAERP	EMEQEIRDRVMAA	IRAGNAGEAPALAP	APAAPEAAE.A.....			363
NTDB id 1245 Cj1673c YP 002345041.1	KLGGGR	ENSKAFLKENPEIA	DEITKAIQNSMGI	EGMIS.....GSE	DDGEE.....			343
NTDB id 1211 C694 RS00795 WP 000963128.1	KLGGGR	ENAKALLKEDKALA	DEITLKIKESIGS	NEEIM.....PLP	DEPLEEME.....			347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	KLGGGR	ENAKALLKEDKALA	DEITLKIKESIGS	NEEIM.....PLP	DEPLEEME.....			347
NTDB id 1334 RAOC RS04870 WP 004918236.1	KLGGGR	DTVKELIKDNPELA	EELAKIREKLQAK					343
NTDB id 1130 NGFG RS03960 WP 003688695.1	KIGQGD	NVRVWLKENPEIS	DEIDAKIRALNGV	EMHIT.....EGT	QDET	DGERP.....EE		348
NTDB id 1124 NGFG RS03960 WP 003688695.1	KIGQGD	NVRVWLKENPEIS	DEIDAKIRALNGV	EMHIT.....EGT	QDET	DGERP.....EE		348
NTDB id 1123 OK783 RS03845 WP 003688695.1	KIGQGD	NVRVWLKENPEIS	DEIDAKIRALNGV	EMHIT.....EGT	QDET	DGERP.....EE		348
NTDB id 44745 RGE RS22735 WP 014430841.1	KIGQGD	NAREFLRENPDIA	REIENKVRRESLG	IPQLPA.....AD	GAEGA.....			348
NTDB id 1427 RS RS02760 WP 011000510.1	RIGQGR	DNCREFLRENAEL	AREIENKVRHLGV	TPMGA.....VTL	AEEVEED.....			352
NTDB id 1389 A4U84 RS07560 WP 021112712.1	KIGQGN	NAVKKLKENPEIA	DKLEQEIENRNTL	ASNPNSV....LK	ATASDSNDES	DV..EEFSEEL		372
NTDB id 1165 A1552VC RS01565 WP 000344154.1	KIGQGN	ANACKYLLKENPEI	AKTLDKKLREML	LNPNENMQ....L	IAETSSAADD	VEF..GAVPEEF		354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	KIGQGN	ANACKYLLKENPEI	AKTLDKKLREML	LNPNENMQ....L	IAETSSAADD	VEF..GAVPEEF		354
NTDB id 1022 ACIAD RS06390 WP 004925639.1	KIGQGN	NVIRYLEENPQIST	EIEAVIREQLLT	TKASDQ....TAA	.HDETEEEP	DL..L..ES		349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	KIGQGN	NVIRYFEENNQIA	EIEERNIREQLLT	TGTNG....AVQ	.I.EDEEEP	DL..L..LES		349
NTDB id 1205 PSJM300 05545 AFN77183.1	KIGQGN	ANAACKYLEENPEI	IGQIEEQIRAKLL	VTSANT.....K	ATPVAEDLAD	ADI.....		347
consensus	**!!!	*****	**	*****	*****	**	**	

logo

NTDB id 600 KW2 RS01765 WP 011675413.1	.	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	E	388
NTDB id 228 SPD RS09265 WP 001085462.1	E	388
NTDB id 194 SPR RS08825 WP 001085462.1	E	388
NTDB id 159 SP RS09750 WP 001085462.1	E	388
NTDB id 527 SMSK321 RS11065 WP 001085454.1	E	384
NTDB id 499 SM12261 RS08315 WP 078228268.1	E	384
NTDB id 453 Spy49 1753c ACI62003.1	.	378
NTDB id 408 SMU RS09530 WP 002262392.1	.	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 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 44745 RGE RS22735 WP 014430841.1	.	348
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

 non conserved
 similar
 ≥ 50% conserved