

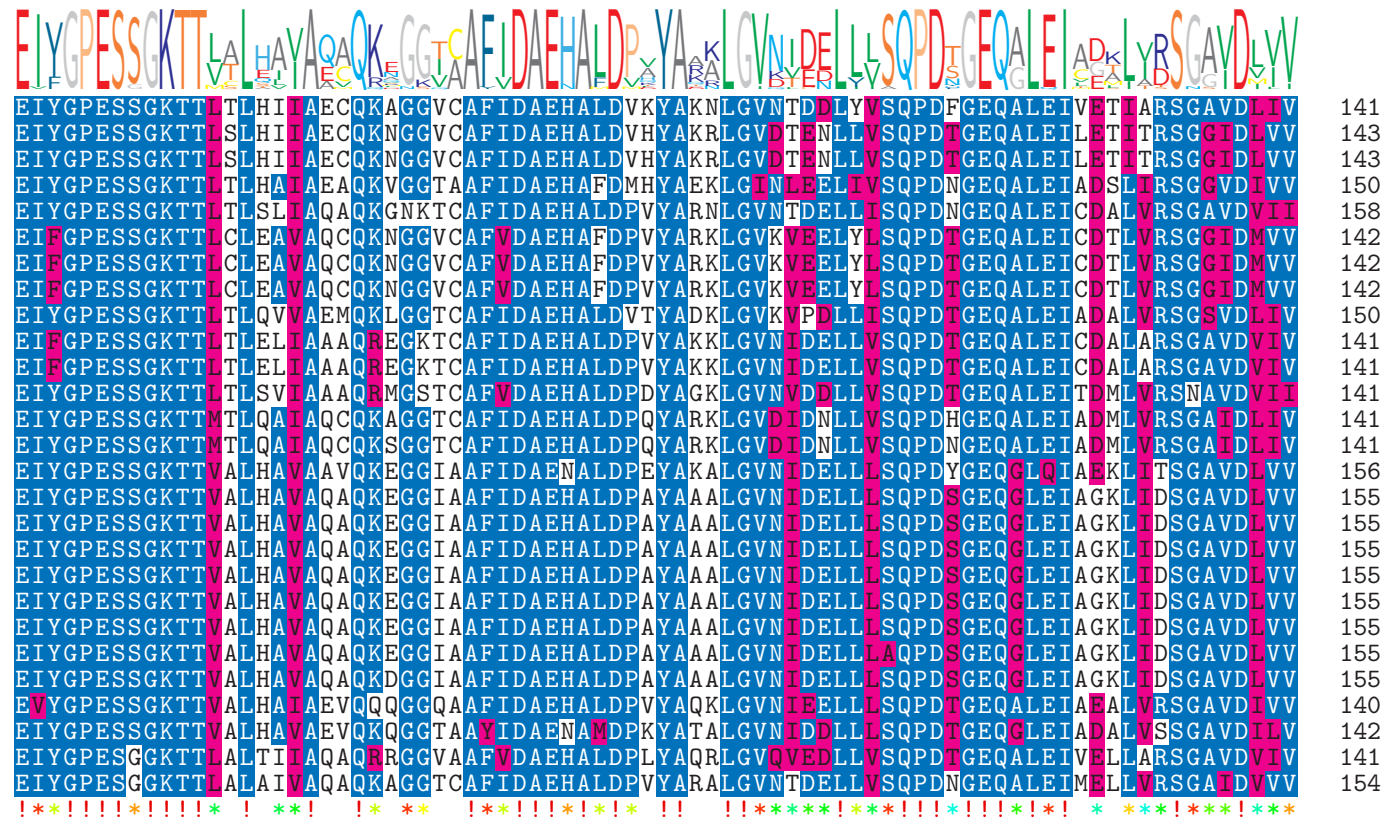
logo

NTDB id 1245 Cj1673c YP 002345041.1	MD	DNKRKSLDAALKS	LDKT	FGKGTILRLGDK	.EVEQ	IDS	IGTGSVGLDL	ALGIGGV	PKGRIT	61
NTDB id 1214 NCTC11637 00359 SQJ03206.1	MAID	EDKQKATISLAIKQ	IDKV	FGKGALVRLGDK	.QVEK	IDA	ISTGSLGLDL	ALGIGGV	PKGRIT	63
NTDB id 1211 C694 RS00795 WP 000963128.1	MAID	EDKQKATISLAIKQ	IDKV	FGKGALVRLGDK	.QVEK	IDS	ISTGSLGLDL	ALGIGGV	PKGRIT	63
NTDB id 1334 RAOC RS04870 WP 004918236.1	MAKTETTSPN	DDKKKALAAVLEK	LDKT	YGKGTVMKLG	DGTVDHN	IEV	IPSGSLGLDL	ALGVGGY	PKGRIV	70
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKKSSKNNTVVKKQVEP	EQKKQALEAALAQ	IEKQ	FGKGSIMKLGQT	.EQLD	IESV	TGSLGLDL	ALGIGGL	PMGRIV	78
NTDB id 1130 NGFG RS03960 WP 003688695.1	MS	DDKSKALAAALAQ	IEKS	FGKGAIMKMDGS	QQUEEN	LEV	ISTGSLGLDL	ALGVGGL	PRGRIV	62
NTDB id 1124 NGFG RS03960 WP 003688695.1	MS	DDKSKALAAALAQ	IEKS	FGKGAIMKMDGS	QQUEEN	LEV	ISTGSLGLDL	ALGVGGL	PRGRIV	62
NTDB id 1123 OK783 RS03845 WP 003688695.1	MS	DDKSKALAAALAQ	IEKS	FGKGAIMKMDGS	QQUEEN	LEV	ISTGSLGLDL	ALGVGGL	PRGRIV	62
NTDB id 1427 RS RS02760 WP 011000510.1	.MEDG.....KKAASMSA	EKKALAAALAQ	IEKQ	FGKGSIMKMGDA	.EVEPVQVV	STGSLGLD	VALGVGGL	PRGRVV		70
NTDB id 1165 A1552VC RS01565 WP 000344154.1	MD	ENKQKALAAALGQ	IEKQ	FGKGSIMRLGDN	.RAMDVET	ISTGSL	SLDIALGAGGL	PMGRIV		61
NTDB id 1142 GTF74 RS11550 WP 000344154.1	MD	ENKQKALAAALGQ	IEKQ	FGKGSIMRLGDN	.RAMDVET	ISTGSL	SLDIALGAGGL	PMGRIV		61
NTDB id 1205 PSJM300 05545 AFN77183.1	MD	ENKKRALAAALGQ	IEKQ	FGKGAVMRMGDH	.DRQA	IPS	ISTGSLGLD	I	ALGIGGLPKGRIV	61
NTDB id 1022 ACIAD RS06390 WP 004925639.1	MD	DNKSKALQAALSQ	IEKQ	FGKNTVMRLGDN	.TVQAVEAV	STGSLTLD	I	ALGIGGLPKGRIV		61
NTDB id 1074 ABD1 RS10195 WP 000344167.1	MD	ENKSKALQAALSQ	IEKQ	FGKNTVMRLGDN	.TVQAVEAV	STGSLTLD	I	ALGIGGLPKGRIT		61
NTDB id 600 KW2 RS01765 WP 011675413.1	MATK...KKTNFDDITKKYGA	ERDKALADALAL	IEKD	FGKGSIMRLGEA	.ANQKVS	VSSGSLALD	I	ALGAGGY	PKGRIV	76
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAK...KPKKLEEISKKFGA	EREKALNDALKL	IEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGRIT	75
NTDB id 228 SPD RS09265 WP 001085462.1	.MAK...KPKKLEEISKKFGA	EREKALNDALKL	IEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGRIT	75
NTDB id 194 SPR RS08825 WP 001085462.1	.MAK...KPKKLEEISKKFGA	EREKALNDALKL	IEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGRIT	75
NTDB id 159 SP RS09750 WP 001085462.1	.MAK...KPKKLEEISKKFGA	EREKALNDALKL	IEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGRIT	75
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAK...KPKKLDEISKKFGA	EREKALNDALKL	IEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGRIT	75
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAK...KPKKLDEISKKFGA	EREKALNDALKL	IEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGRIT	75
NTDB id 453 Spy49 1753c ACI62003.1	.MAK...KLKKNEEITKKFG	DERRKALDDALKN	IEKD	FGKGAVMRLGER	.AEQKVQVM	SSGSLALD	I	ALGAGGY	PKGRIT	75
NTDB id 408 SMU RS09530 WP 002262392.1	.MAK...RIKKTEEITKKFG	DERKKALDDALKN	IEKD	FGKGAVMRLGER	.AEQKVQVM	SSGSLALD	I	ALGAGGY	PKGRIV	75
NTDB id 115 BSU 16940 NP 389576.2	MS	DRQAALDMALKQ	IEKQ	FGKGSIMKLGEK	.TDTR	ISTV	PSGSLALD	TALGIGGY	PRGRIT	60
NTDB id 625 LCA RS02525 WP 011374196.1	MAK	DERQAALDAALKK	IEKN	FGKGSIMRMGEK	.VDTQV	STVSSGSLALDE	ALGVGGY	PRGRIV		62
NTDB id 52368 JQN53 RS10305 WP 011228937.1	MD	ESKRKALENALKA	IEKE	FGKGAVMRLGEM	.PKQQVDV	IPTGSLALD	L	ALGIGGI	PRGRIV	61
NTDB id 1313 DR RS12030 WP 010888966.1	.MSK...DAT	KEISAPTDAKERSKAL	IETAMSQ	IEKAFGKGSIMKLGAE	.SKLDVQVV	STGSLSLDL	L	ALGVGGI	PRGRIT	74
consensus		*** **	**	***	***	***	***	***	***	

```

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 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 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
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 52368 JQN53 RS10305 WP 011228937.1
NTDB id 1313 DR RS12030 WP 010888966.1
consensus

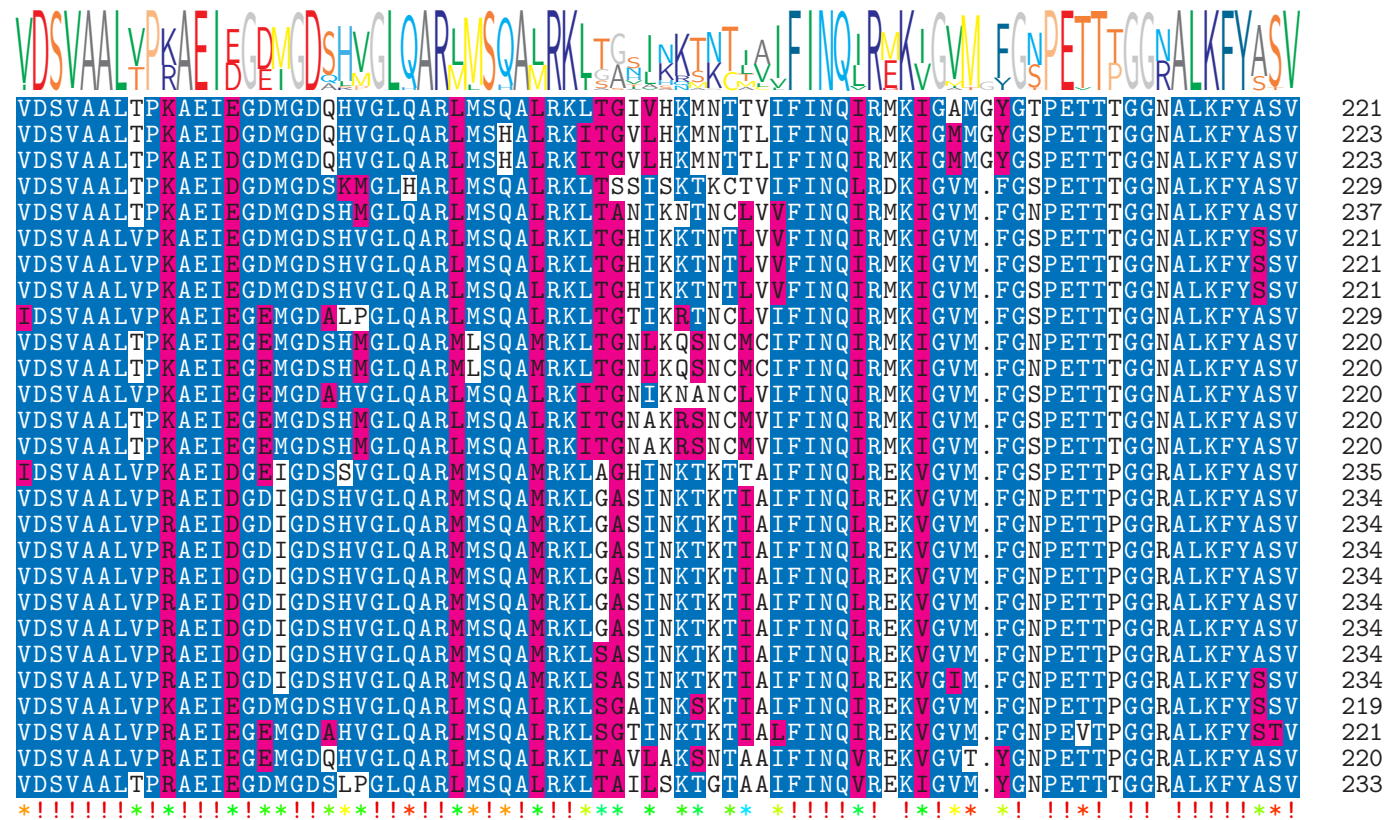
```



```

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 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 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
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 52368 JQN53 RS10305 WP 011228937.1
NTDB id 1313 DR RS12030 WP 010888966.1
consensus

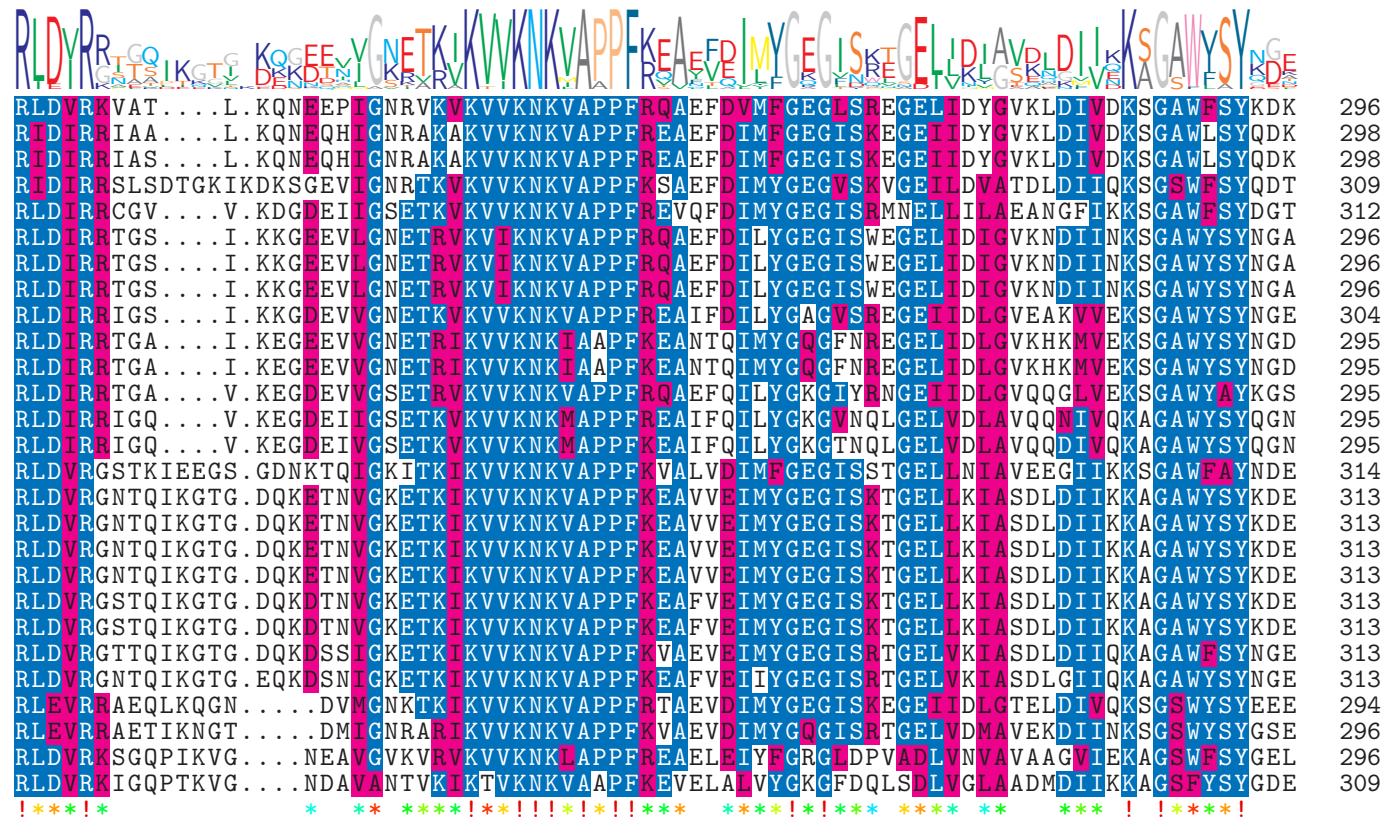
```



```

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 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 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
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 52368 JQN53 RS10305 WP 011228937.1
NTDB id 1313 DR RS12030 WP 010888966.1
consensus

```



logo

NTDB id 1245 Cj1673c YP 002345041.1	KLGGGRENKAFLENPEIADEITKATQNSMGI	IEGMISGSEDDE..GEE	343
NTDB id 1214 NCTC11637 00359 SQJ03206.1	KLGGGRENKALLKEDKALADEITLKI	ESIGSNEEIMPLPDEP..LEEM.E	347
NTDB id 1211 C694 RS00795 WP 000963128.1	KLGGGRENKALLKEDKALADEITLKI	ESIGSNEEIMPLPDEP..LEEM.E	347
NTDB id 1334 RAOC RS04870 WP 004918236.1	KLGGGRDITVKELIKDNPELAEELEAKI	REKLQAK	343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	KIGQGGKNNNAVKWLKENPEIADKLEQEI	RNTLASNPNSVLKATASDSNDES.DVEEF	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	KIGQGGKDNVRVWLKENPEISDEIDAKI	RALNGVEMHITEGT.....QDE.TDGER	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	KIGQGGKDNVRVWLKENPEISDEIDAKI	RALNGVEMHITEGT.....QDE.TDGER	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	KIGQGGKDNVRVWLKENPEISDEIDAKI	RALNGVEMHITEGT.....QDE.TDGER	348
NTDB id 1427 RS RS02760 WP 011000510.1	RIGQGRDNCREFLRENAELAREIENKVR	REHLGVTPMGAV.TLAEEVEED	352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	KIGQGGKANACKYLLKENPEIAKTLDKKL	REMLLNPNMQLIAETSSAADV.EFGAV	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	KIGQGGKANACKYLLKENPEIAKTLDKKL	REMLLNPNMQLIAETSSAADV.EFGAV	354
NTDB id 1205 PSJM300 05545 AFN77183.1	KIGQGGKANAACKYLEENPEIGQEIEQQI	IRAKLLVTSANTKATPVAEDLADA.DI	347
NTDB id 1022 ACIAD RS06390 WP 004925639.1	KIGQGGKNNVIRYLEENPQISTEIEEAVI	REQLLTKASDQTAA.HDETEEP.DLL	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	KIGQGGKNNVIRYFEENNQIAEEIERNI	REQLLTGTNGAVQ.I.EDEEEP.DLL	349
NTDB id 600 KW2 RS01765 WP 011675413.1	KIGQGAEEKAKNYLKEHQDVFDEIDHKV	RAAHGLLDSEVAETEETETASKTKAKAKKEEKAVETEEIELELED	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	KIGQGSSENAKKYLAEHPEIFDEIDKQV	RSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIE	387
NTDB id 228 SPD RS09265 WP 001085462.1	KIGQGSSENAKKYLAEHPEIFDEIDKQV	RSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIE	387
NTDB id 194 SPR RS08825 WP 001085462.1	KIGQGSSENAKKYLAEHPEIFDEIDKQV	RSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIE	387
NTDB id 159 SP RS09750 WP 001085462.1	KIGQGSSENAKKYLAEHPEIFDEIDKQV	RSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIE	387
NTDB id 499 SM12261 RS08315 WP 078228268.1	KIGQGSSENAKKYLADNPEIFDEIDHQV	RVQFGLIDGEEIAES....KKDE....AAQVDS..VNEEVTLDLGDELEIEIE	383
NTDB id 527 SMSK321 RS11065 WP 001085454.1	KIGQGSSENAKKYLADNPEVFAEIDHQV	RVQFGLIDGEEAAES....KKDE....VAQVDS..VNEEVTLDLGDELEIEIE	383
NTDB id 453 Spy49 1753c ACI62003.1	KIGQGSSENAKRYLADHPQLFDEIDRKV	RVKFGLLEESEESAMAVASE.....E.....TDDLALDLNGIEIED	378
NTDB id 408 SMU RS09530 WP 002262392.1	KIGQGSSENAKKFLADNPEIFDDIDHKV	RVQYGLIEEDNTEEKQSSKEK.....ETDEK..ADKNLVLELDDTIELED	383
NTDB id 115 BSU 16940 NP 389576.2	RLGGGRENKQFLKENKDIMLMIQEQI	REHYGLDNNGVVQQAEETQEEL.EFE.E	348
NTDB id 625 LCA RS02525 WP 011374196.1	RIGQGGRENKNYLADHEDVEDEVRLKV	RAAYGISDVPEEDLPTTEDE.QI.NILPDDST	355
NTDB id 52368 JQN53 RS10305 WP 011228937.1	RLGGGKEKAEEALRERPELLEEIRAKV	LSRDQVVLAAGEDEGE	340
NTDB id 1313 DR RS12030 WP 010888966.1	RIGQGGKEKTIAIYIAERPMEQEIRDRV	MAAIRAGN..AGEAPALAP...APAAPEAAEA	363
consensus	***!!!!***** ** * *** ***** ** *		

NTDB id	id	name	type	value	consensus
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 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 1205	PSJM300	05545 AFN77183.1	.	347	
NTDB id 1022	ACIAD	RS06390 WP 004925639.1	.	349	
NTDB id 1074	ABD1	RS10195 WP 000344167.1	.	349	
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 499	SM12261	RS08315 WP 078228268.1	E	384	
NTDB id 527	SMSK321	RS11065 WP 001085454.1	E	384	
NTDB id 453	Spy4c	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 52368	JQN53	RS10305 WP 011228937.1	.	340	
NTDB id 1313	DR	RS12030 WP 010888966.1	.	363	

- ☐ non conserved
- ☒ similar
- ☒ $\geq 50\%$ conserved