

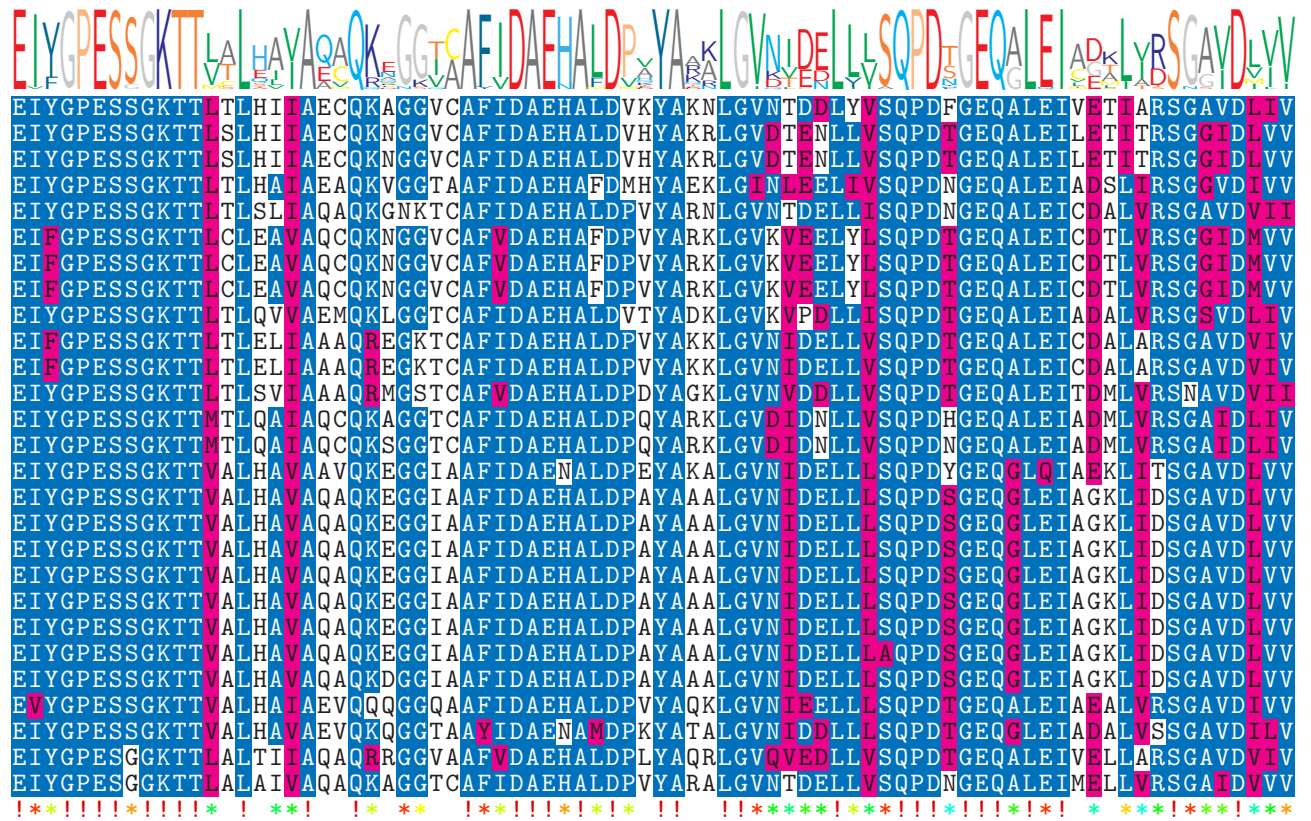
logo



NTDB id 1245 Cj1673c YP 002345041.1	.....MD	DNKRKSLDAALKS	LDKTFGKGTILRLGDK	.EVEQIDSIGTGSVGLDL	ALGIGGVPKGRIT	61
NTDB id 1211 C694 RS00795 WP 000963128.1	.....MAID	EDKQKATISLAIKQ	IDKVFSGKALVRLGDK	.QVEKIDISTGSLGLDL	ALGIGGVPKGRIT	63
NTDB id 1214 NCTC11637 00359 SQJ03206.1	.....MAID	EDKQKATISLAIKQ	IDKVFSGKALVRLGDK	.QVEKIDISTGSLGLDL	ALGIGGVPKGRIT	63
NTDB id 1334 RAOC RS04870 WP 004918236.1	.....MAKTETTSPN	DDKKKALAAVLEK	LDKTYGKGTVMKLGDT	VDHNIIEVIPSGLGLDL	ALGVGGYPKGRIV	70
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKSSKNNTVVVKQVEP	EQQKQALEAALAQ	IEKQFGKGSIMKLGQT	.EQLDIESVSTGSLGLDL	ALGIGGLPMGRIV	78	
NTDB id 1130 NGFG RS03960 WP 003688695.1	.....MS	DDKSKALAAALAQ	IEKSFSGKGAIMKMDGS	QREENLEVISTGSLGLDL	ALGVGGLPRGRIV	62
NTDB id 1124 NGFG RS03960 WP 003688695.1	.....MS	DDKSKALAAALAQ	IEKSFSGKGAIMKMDGS	QREENLEVISTGSLGLDL	ALGVGGLPRGRIV	62
NTDB id 1123 OK783 RS03845 WP 003688695.1	.....MS	DDKSKALAAALAQ	IEKSFSGKGAIMKMDGS	QREENLEVISTGSLGLDL	ALGVGGLPRGRIV	62
NTDB id 1427 RS RS02760 WP 011000510.1	.MEDG.....KKAASMSA	EKQKALAAALAQ	IEKQFGKGSIMKMGDA	.EVEPVQVSTGSLGLD	VALGVGGLPRGRVV	70	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	.....MD	ENKQKALAAALGQ	IEKQFGKGSIMRLGDN	.RAMDVETISTGSLSLD	IALGAGGLPMGRIV	61
NTDB id 1142 GTF74 RS11550 WP 000344154.1	.....MD	ENKQKALAAALGQ	IEKQFGKGSIMRLGDN	.RAMDVETISTGSLSLD	IALGAGGLPMGRIV	61
NTDB id 1205 PSJM300 05545 AFN77183.1MD	ENKRRALAAALGQ	IEKQFGKGAVMRMGDH	.DRQAIPSI	ISTGSLGLDI	ALGIGGLPKGRIV	61
NTDB id 1022 ACIAD RS06390 WP 004925639.1	.....MD	DNKSKALQAALSQ	IEKQFGKNTVMRLGDN	.TVQAVEAVSTGSLTLD	IALGIGGLPKGRIV	61
NTDB id 1074 ABD1 RS10195 WP 000344167.1	.....MD	ENKSKALQAALSQ	IEKQFGKNTVMRLGDN	.TVQAVEAVSTGSLTLD	IALGIGGLPKGRIV	61
NTDB id 600 KW2 RS01765 WP 011675413.1	MATK...KKTNFDDITKKYGA	ERDKALADALAL	IEKDFGKGSIMRLGEA	.ANQKVS	VVSSGSLALDI	ALGAGGYPKGRIV	76
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAK...KPKKLEEISKKFGA	EREKALNDALKL	IEKDFGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGRIT	75	
NTDB id 228 SPD RS09265 WP 001085462.1	.MAK...KPKKLEEISKKFGA	EREKALNDALKL	IEKDFGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGRIT	75	
NTDB id 194 SPR RS08825 WP 001085462.1	.MAK...KPKKLEEISKKFGA	EREKALNDALKL	IEKDFGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGRIT	75	
NTDB id 159 SP RS09750 WP 001085462.1	.MAK...KPKKLEEISKKFGA	EREKALNDALKL	IEKDFGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGRIT	75	
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAK...KPKKLDEISKKFGA	EREKALNDALKL	IEKDFGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGRIT	75	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAK...KPKKLDEISKKFGA	EREKALNDALKL	IEKDFGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGRIT	75	
NTDB id 453 Spy49 1753c ACI62003.1	.MAK...KLKKNEEITKKFG	DERRKALDDALKN	IEKDFGKGAVMRLGER	.AEQKVQVMSSGSLALDI	ALGAGGYPKGRIT	75	
NTDB id 408 SMU RS09530 WP 002262392.1	.MAK...RIKKTEEITKKFG	DERKALDDALKN	IEKDFGKGAVMRLGER	.AEQKVQVMSSGSLALDI	ALGAGGYPKGRIV	75	
NTDB id 115 BSU 16940 NP 389576.2MS	DRQAALDMALKQ	IEKQFGKGSIMKLGEK	.TDTRI	ISTVPSGSLALDI	ALGIGGYPRGRIT	60
NTDB id 625 LCA RS02525 WP 011374196.1	.....MAK	DERQAALDAALKK	IEKNFGKGSIMRMGEK	.VDTQVSTVSSGSLALDE	ALGVGGYPRGRIV	62
NTDB id 68808 ABWW24 RS09750 WP 143586689.1MD	ESKRKALENALKA	IEKEFGKGAVMRLGEM	.PKQQVDV	IPTGSLALDL	ALGIGGIPRGRIV	61
NTDB id 1313 DR RS12030 WP 010888966.1	.MSK...DAT	KEISAPTDAKERSKAL	IETAMSQIEKAFGKGSIMKLGAE	.SKLDVQV	VSTGSLSLDL	ALGVGGIPRGRIT	74
consensus		*** **	** **!	***!*****	*	***!***!***!***!***!***!***!***	

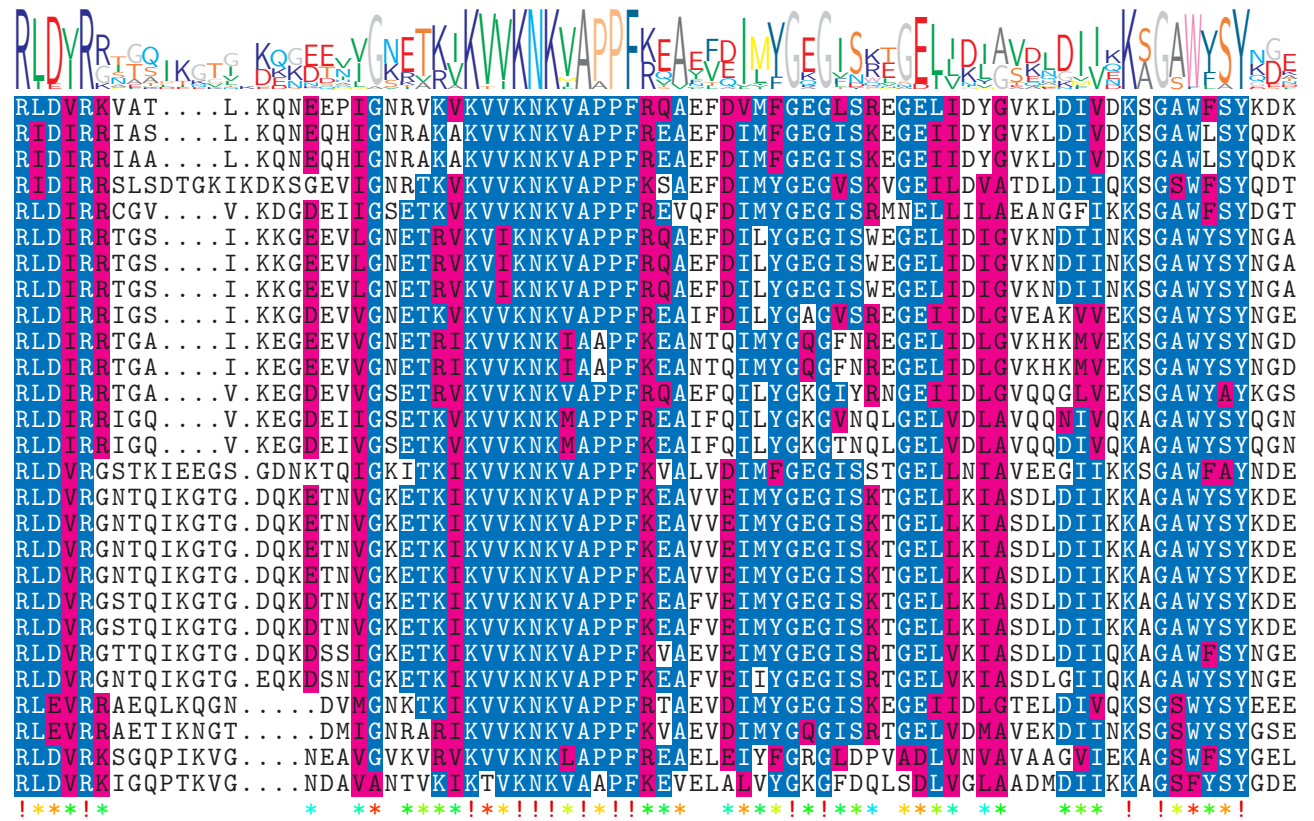
logo

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 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 68808 ABWW24 RS09750 WP 143586689.1
 NTDB id 1313 DR RS12030 WP 010888966.1
 consensus



logo

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 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 68808 ABWW24 RS09750 WP 143586689.1
 NTDB id 1313 DR RS12030 WP 010888966.1
 consensus



!***!* * ** *****!*****!*****!***** *****!***** ***** ** ***** ! !*****!

logo

```
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 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 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 68808 ABWW24 RS09750 WP 143586689.1 . 340
NTDB id 1313 DR RS12030 WP 010888966.1 . 363
consensus
```

non conserved
 similar
 ≥ 50% conserved