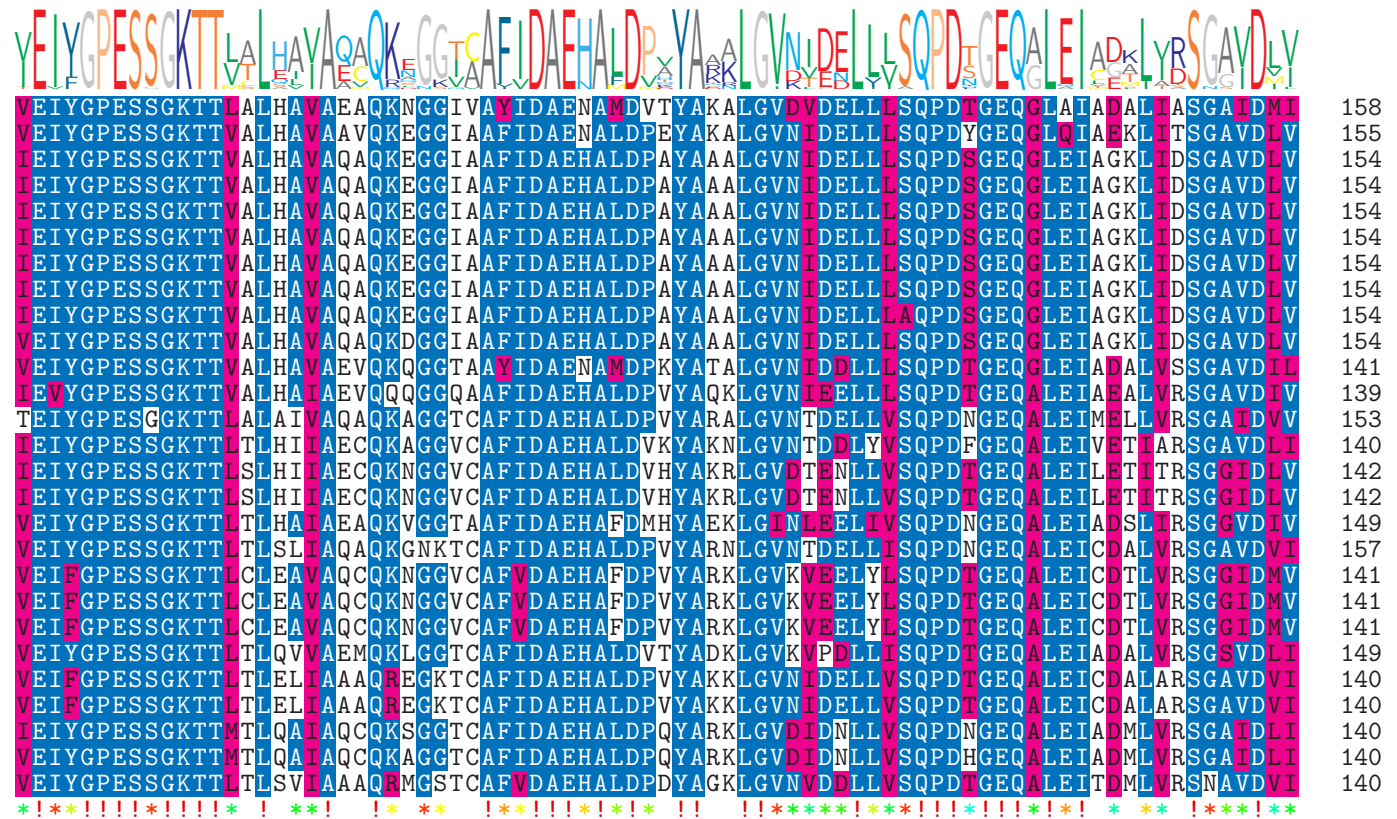


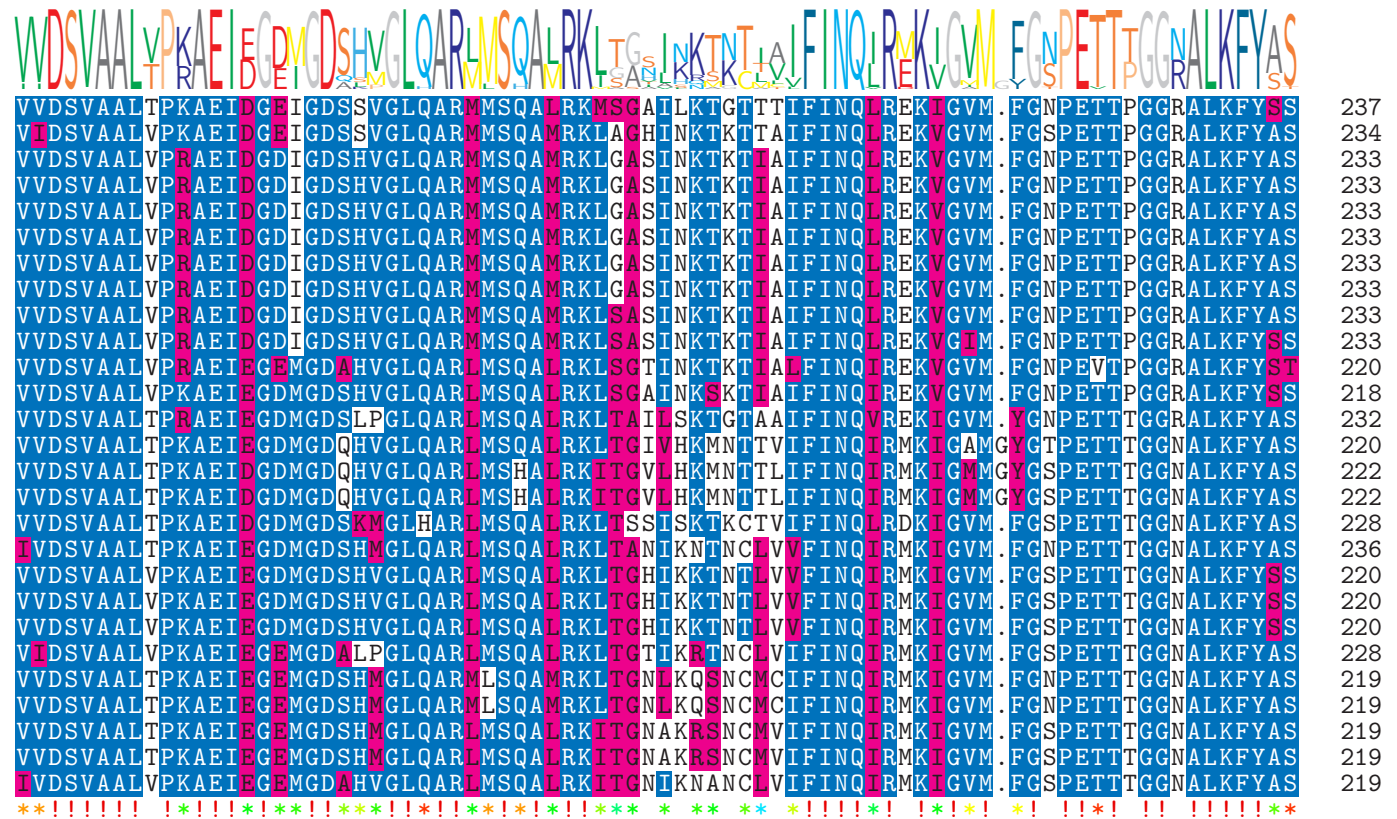
logo

NTDB id 1034009 AB9G37 RS04170 WP 141926663.1	MATGKNINPNKKLEG.KITDPK	ERQNALDDALKKIEKSF	FGKGSVMKLGDS.KFTK	VESTPTGSLKLD	VALGIGGY	PKGRI	78
NTDB id 600 KW2 RS01765 WP 011675413.1	MAT.KK..KTNFDDI.TKKYGA	ERDKALADALALIEKD	FGKGSIMRLGEA.ANQK	VSVVSSGSLALD	I	ALGAGGY	75
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MA.KK..PKKLEEI.SKKFGA	EREKALNDALKLEKD	FGKGSIMRLGER.AEQK	VQVMSSGSLALD	I	ALGSGGY	74
NTDB id 228 SPD RS09265 WP 001085462.1	.MA.KK..PKKLEEI.SKKFGA	EREKALNDALKLEKD	FGKGSIMRLGER.AEQK	VQVMSSGSLALD	I	ALGSGGY	74
NTDB id 194 SPR RS08825 WP 001085462.1	.MA.KK..PKKLEEI.SKKFGA	EREKALNDALKLEKD	FGKGSIMRLGER.AEQK	VQVMSSGSLALD	I	ALGSGGY	74
NTDB id 159 SP RS09750 WP 001085462.1	.MA.KK..PKKLEEI.SKKFGA	EREKALNDALKLEKD	FGKGSIMRLGER.AEQK	VQVMSSGSLALD	I	ALGSGGY	74
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MA.KK..PKKLDEI.SKKFGA	EREKALNDALKLEKD	FGKGSIMRLGER.AEQK	VQVMSSGSLALD	I	ALGSGGY	74
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MA.KK..PKKLDEI.SKKFGA	EREKALNDALKLEKD	FGKGSIMRLGER.AEQK	VQVMSSGSLALD	I	ALGSGGY	74
NTDB id 453 Spy49 1753c ACI62003.1	.MA.KK..LKKNEEI.TKKFGD	ERRKALDDALKNIEKD	FGKGAVMRLGER.AEQK	VQVMSSGSLALD	I	ALGAGGY	74
NTDB id 408 SMU RS09530 WP 002262392.1	.MA.KR..IKKTEEI.TKKFGD	ERKKALDDALKNIEKD	FGKGAVMRLGER.AEQK	VQVMSSGSLALD	I	ALGAGGY	74
NTDB id 625 LCA RS02525 WP 011374196.1	MAKD	ERQAALDAALKKIEKN	F	FGKGSIMRMGEK.VDTQ	VSTVSSGSLALDEALGVGGY	PRGRI	61
NTDB id 115 BSU 16940 NP 389576.2	MSDRQAALDMALKQ	IEKQFGKGSIMKLGEK.TDTR	ISTVPSGSLALDTALGIGGY	PRGRI			59
NTDB id 1313 DR RS12030 WP 010888966.1	MSKDATKEISAPTD	AKERSKATETAMSQIEKA	F	FGKGSIMKLGAESKLDVQV	VSTGSLSLDLALGVGGIP	PRGRI	73
NTDB id 1245 Cj1673c YP 002345041.1	MDDNKRKSLDAALKS	LDKTFGKGTILRLGDK.EVEQ	IDSIGTGSVGLDLALGIGGV	PKGRI			60
NTDB id 1211 C694 RS00795 WP 000963128.1	MAIDE	DKQKATISLAIKQIDKV	FGKGA	LVRLGDK.QVEKIDS	ISTGSLGLDLALGIGGV	PKGRI	62
NTDB id 1214 NCTC11637 00359 SQJ03206.1	MAIDE	DKQKATISLAIKQIDKV	FGKGA	LVRLGDK.QVEKIDA	ISTGSLGLDLALGIGGV	PKGRI	62
NTDB id 1334 RAOC RS04870 WP 004918236.1	MAKT..ETTSPND	DKKKAALAAVLEKLDKT	YGKGTVMKLGDTVDHN	IEVIPS	SGSLGLDLALGVGGY	PKGRI	69
NTDB id 1389 A4U84 RS07560 WP 021112712.1	MAENKKSSKNNTV..VKQVEPEQ	KKQALEAALAQIEKQ	F	FGKGSIMKLQQT.EQLDIES	VSTGSLGLDLALGIGGL	PMGRI	77
NTDB id 1130 NGFG RS03960 WP 003688695.1	MSD	DKSKALAAALAQIEKS	F	FGKGAIMKMDGSQREENLEV	ISTGSLGLDLALGVGGL	PRGRI	61
NTDB id 1124 NGFG RS03960 WP 003688695.1	MSD	DKSKALAAALAQIEKS	F	FGKGAIMKMDGSQREENLEV	ISTGSLGLDLALGVGGL	PRGRI	61
NTDB id 1123 OK783 RS03845 WP 003688695.1	MSD	DKSKALAAALAQIEKS	F	FGKGAIMKMDGSQREENLEV	ISTGSLGLDLALGVGGL	PRGRI	61
NTDB id 1427 RS RS02760 WP 011000510.1	MEDG.....K..KAASMSA	EKQKALAAALAQIEKQ	F	FGKGSIMKMGDA.EVEPVQV	VSTGSLGLDVALGVGGL	PRGRV	69
NTDB id 1165 A1552VC RS01565 WP 000344154.1	MDENKQKALAAALGQ	IEKQFGKGSIMRLGDN.RAMD	VETISTGSLSLD	I	ALGAGGL	PMGRI	60
NTDB id 1142 GTF74 RS11550 WP 000344154.1	MDENKQKALAAALGQ	IEKQFGKGSIMRLGDN.RAMD	VETISTGSLSLD	I	ALGAGGL	PMGRI	60
NTDB id 1074 ABD1 RS10195 WP 000344167.1	MDENKSKALQAALSQ	IEKQFGKNTVMRLGDN.TVQA	VEAVSTGSLTLD	I	ALGIGGL	PKGRI	60
NTDB id 1022 ACIAD RS06390 WP 004925639.1	MDDNKS	KALQAALSQIEKQFGKNTVMRLGDN.TVQA	VEAVSTGSLTLD	I	ALGIGGL	PKGRI	60
NTDB id 1205 PSJM300 05545 AFN77183.1	MDENKKR	BALAAALGQIEKQFGKGA	VMRMGDH.DRQAIPS	ISTGSLGLD	I	ALGIGGL	60
consensus		*** **	***	***	***	***	

NTDB id 1034009 AB9G37 RS04170 WP 141926663.1
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 625 LCA RS02525 WP 011374196.1
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 RA0C 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



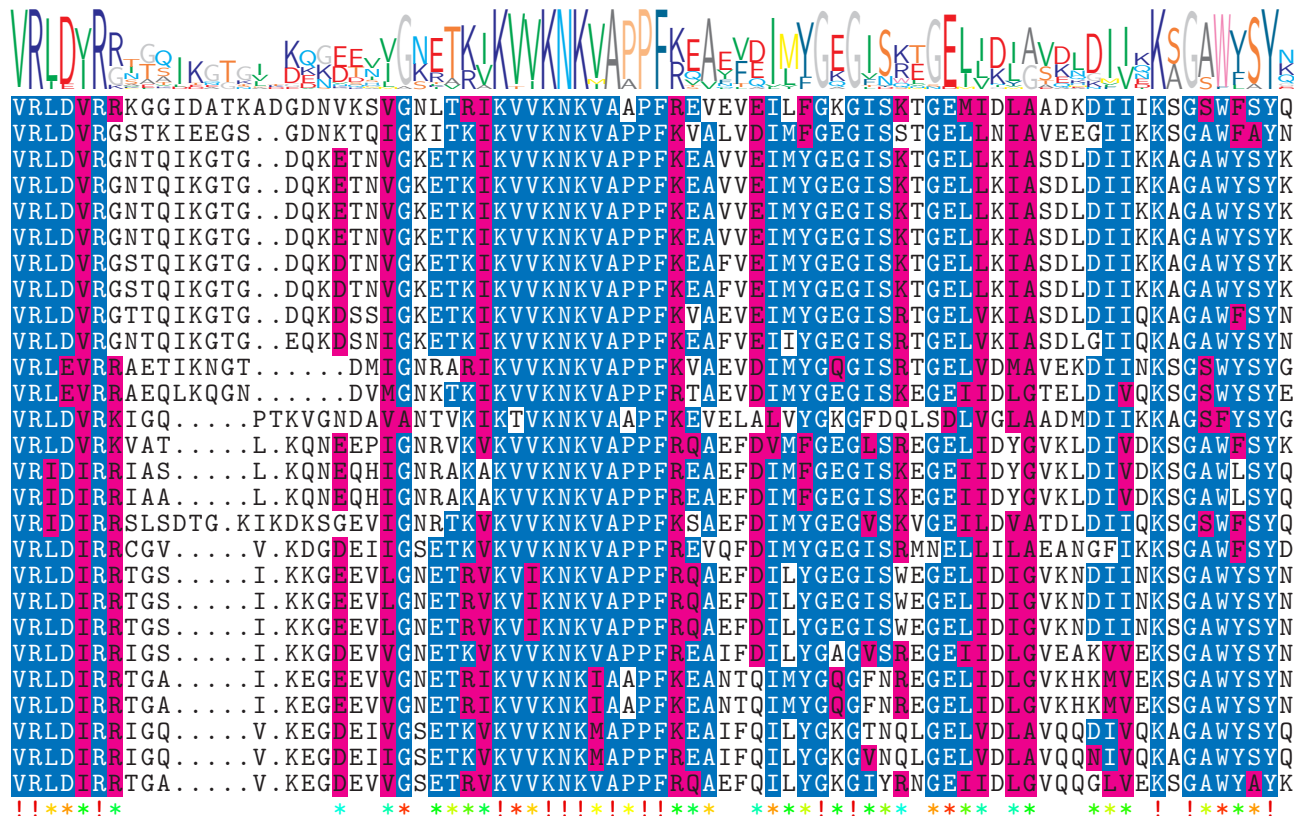
NTDB id 1034009 AB9G37 RS04170 WP 141926663.1
NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 625 LCA RS02525 WP 011374196.1
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 RA0C 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 1034009 AB9G37 RS04170 WP 141926663.1
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 625 LCA RS02525 WP 011374196.1
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 RA0C 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

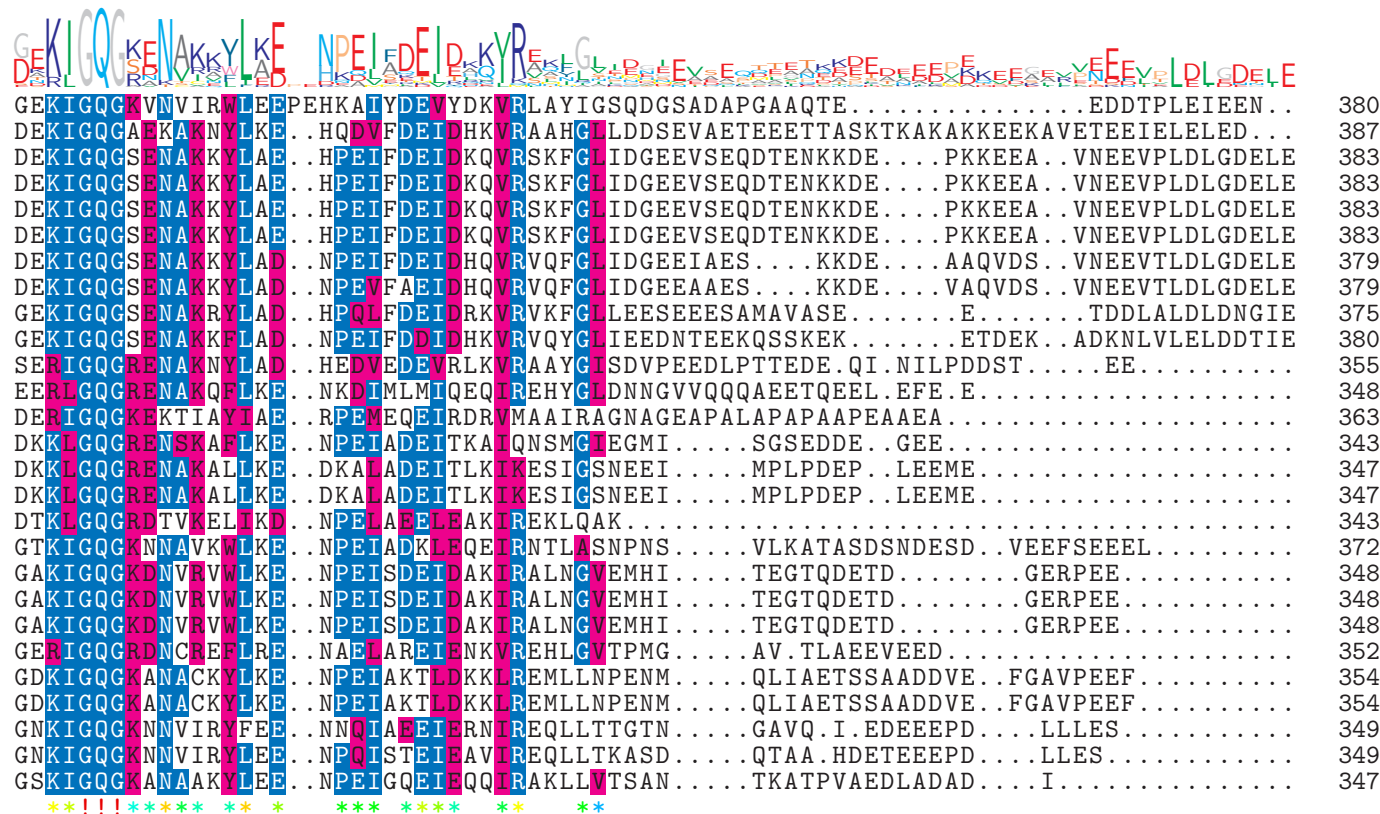
consensus



```

NTDB id 1034009 AB9G37 RS04170 WP 141926663.1
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 625 LCA RS02525 WP 011374196.1
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

				IEEE	
NTDB	id	1034009 AB9G37 RS04170 WP 141926663.1	.....	380	
NTDB	id	600 KW2 RS01765 WP 011675413.1	.....	387	
NTDB	id	269 KZH43 RS08665 WP 001085462.1	IEIEEE	388	
NTDB	id	228 SPD RS09265 WP 001085462.1	IEIEEE	388	
NTDB	id	194 SPR RS08825 WP 001085462.1	IEIEEE	388	
NTDB	id	159 SP RS09750 WP 001085462.1	IEIEEE	388	
NTDB	id	499 SM12261 RS08315 WP 078228268.1	IEIEEE	384	
NTDB	id	527 SMSK321 RS11065 WP 001085454.1	IEIEEE	384	
NTDB	id	453 Spy49 1753c ACI62003.1	IED..	378	
NTDB	id	408 SMU RS09530 WP 002262392.1	LED..	383	
NTDB	id	625 LCA RS02525 WP 011374196.1	.....	355	
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
-  $\geq 50\%$ conserved