

logo

NTDB id 1313 DR RS12030 WP 010888966.1	.MSKD...ATKEISAPTDAKERSKATETAMSIIEKAFGKGSIMKLGAE.SKLDVQVVSTGSLSLDLALGVGGIPRGRIT	74
NTDB id 600 KW2 RS01765 WP 011675413.1	MATKK...KTNFDDITKKYGAERDKALADALALIEKDFGKGSIMRLGAE.ANQKVSVVSSGSLALDIALGAGGYPKGRIV	76
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAKK...PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT	75
NTDB id 228 SPD RS09265 WP 001085462.1	.MAKK...PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT	75
NTDB id 194 SPR RS08825 WP 001085462.1	.MAKK...PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT	75
NTDB id 159 SP RS09750 WP 001085462.1	.MAKK...PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT	75
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAKK...PKKLDEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT	75
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAKK...PKKLDEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT	75
NTDB id 453 Spy49 1753c ACI62003.1	.MAKK...LKKNEEITKKFGDERRKALDDALKNIEKDFGKGAVMRLGER.AEQKVQVMSSGSLALDIALGAGGYPKGRIT	75
NTDB id 408 SMU RS09530 WP 002262392.1	.MAKR...IKKTEEITKKFGDERKKALDDALKNIEKDFGKGAVMRLGER.AEQKVQVMSSGSLALDIALGAGGYPKGRIV	75
NTDB id 115 BSU 16940 NP 389576.2	MSDRQAALDMALKQIEKQFGKGSIMKLGEK.TDTRISTVPSGSLALDTALGIGGYPGRIT	60
NTDB id 625 LCA RS02525 WP 011374196.1	MAKD ERQAALDAALKKIEKNFGKGSIMRMGEK.VDTQVSTVSSGSLALDEALGVGGYPGRIV	62
NTDB id 1245 Cj1673c YP 002345041.1	MDDNKRKSLDAALKSLDKTFGKGTILRLGDK.EVEQIDSIGTGSVGLDLALGIGGVPKGRIT	61
NTDB id 1211 C694 RS00795 WP 000963128.1	MAIDEDKQKALISLAIKQIDKVF GKGA LVRLGDK.QVEKIDSISTGSLGLDLALGIGGVPKGRIT	63
NTDB id 1214 NCTC11637 00359 SQJ03206.1	MAIDEDKQKALISLAIKQIDKVF GKGA LVRLGDK.QVEKIDAISTGSLGLDLALGIGGVPKGRIT	63
NTDB id 1334 RAOC RS04870 WP 004918236.1	MAKTETTSPNDKKKALAAVLEKLDKTYGKGTVMKLGDTVDHNIIEVIPSGSLGLDLALGVGGYPKGRIV	70
NTDB id 169316 AUT26 RS06995 WP 021472659.1	MAATPDREKALEAALAQIDKQFGKGSIMRLGDD.TRAPIEVIPSTGSLALDVALGIGGLPRGRVV	63
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKKSSKNNTVVKKVEPEQKKQKALEAALAQIEKQFGKGSIMKLGQT.EQLDIESVSTGSLGLDLALGIGGLPMGRIV	78
NTDB id 1130 NGFG RS03960 WP 003688695.1	MSDDKSKALAAALAQIEKSFGKGAIMKMDGSQQUEENLEVISTGSLGLDLALGVGGLPRGRIV	62
NTDB id 1124 NGFG RS03960 WP 003688695.1	MSDDKSKALAAALAQIEKSFGKGAIMKMDGSQQUEENLEVISTGSLGLDLALGVGGLPRGRIV	62
NTDB id 1123 OK783 RS03845 WP 003688695.1	MSDDKSKALAAALAQIEKSFGKGAIMKMDGSQQUEENLEVISTGSLGLDLALGVGGLPRGRIV	62
NTDB id 1427 RS RS02760 WP 011000510.1	.MEDG.....KKAASMSAEKQKALAAALAQIEKQFGKGSIMKMGDA.EVEPVQVVSTGSLGLDVALGVGGLPRGRVV	70
NTDB id 1165 A1552VC RS01565 WP 000344154.1	MDENKKKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGRIV	61
NTDB id 1142 GTF74 RS11550 WP 000344154.1	MDENKKKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGRIV	61
NTDB id 1205 PSJM300 05545 AFN77183.1	MDENKKRALAAALGQIEKQFGKGAVMRMGDH.DRQAIPSIISTGSLGLDIALGIGGLPKGRIV	61
NTDB id 1022 ACIAD RS06390 WP 004925639.1	MDDNKKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGRIV	61
NTDB id 1074 ABD1 RS10195 WP 000344167.1	MDENKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGRIT	61
consensus	*** **	

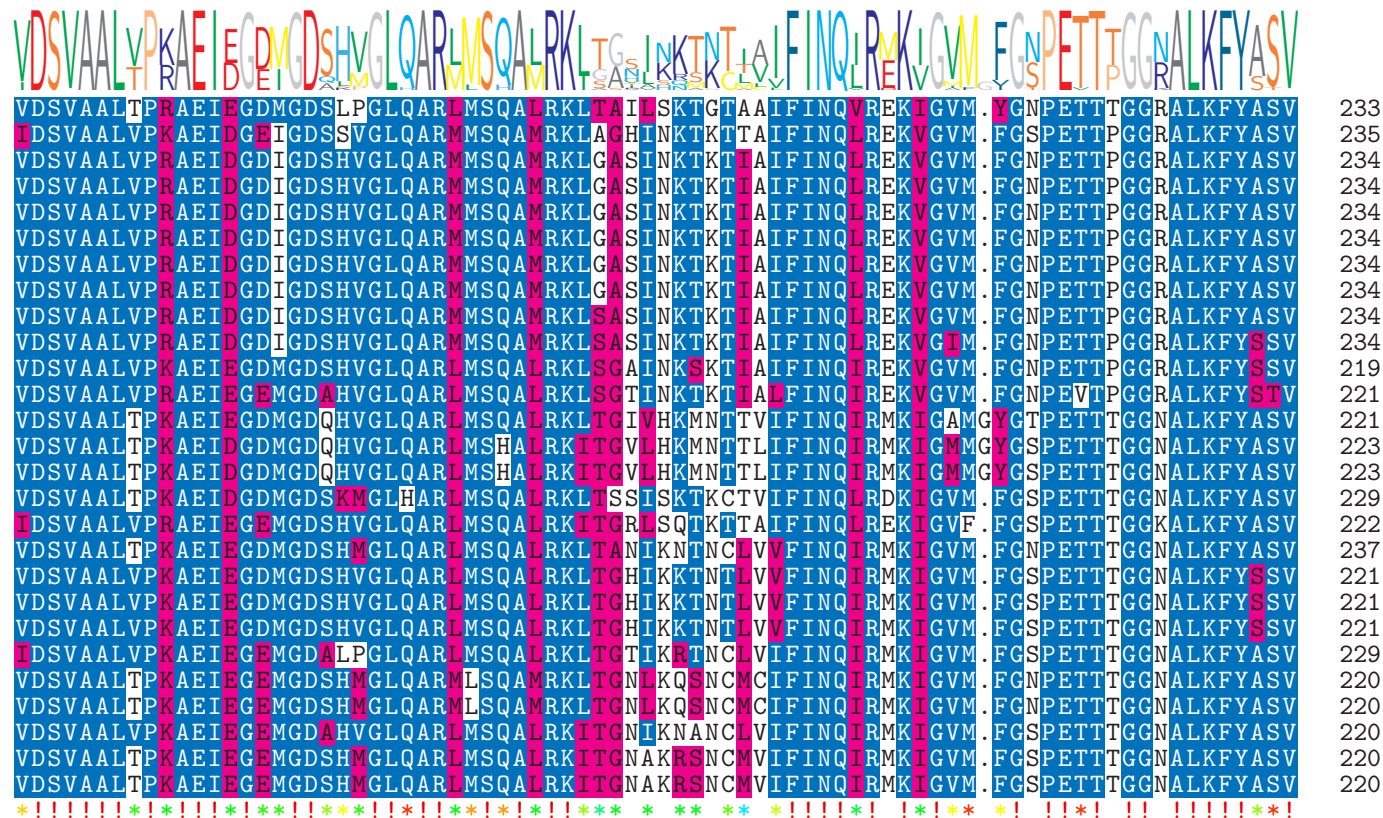
logo

NTDB id 1313 DR RS12030 WP 010888966.1	EIYGPESGGKTT	154
NTDB id 600 KW2 RS01765 WP 011675413.1	EIYGPESGGKTT	156
NTDB id 269 KZH43 RS08665 WP 001085462.1	EIYGPESGGKTT	155
NTDB id 228 SPD RS09265 WP 001085462.1	EIYGPESGGKTT	155
NTDB id 194 SPR RS08825 WP 001085462.1	EIYGPESGGKTT	155
NTDB id 159 SP RS09750 WP 001085462.1	EIYGPESGGKTT	155
NTDB id 499 SM12261 RS08315 WP 078228268.1	EIYGPESGGKTT	155
NTDB id 527 SMSK321 RS11065 WP 001085454.1	EIYGPESGGKTT	155
NTDB id 453 Spy49 1753c ACI62003.1	EIYGPESGGKTT	155
NTDB id 408 SMU RS09530 WP 002262392.1	EIYGPESGGKTT	155
NTDB id 115 BSU 16940 NP 389576.2	EIYGPESGGKTT	140
NTDB id 625 LCA RS02525 WP 011374196.1	EIYGPESGGKTT	142
NTDB id 1245 Cj1673c YP 002345041.1	EIYGPESGGKTT	141
NTDB id 1211 C694 RS00795 WP 000963128.1	EIYGPESGGKTT	143
NTDB id 1214 NCTC11637 00359 SQJ03206.1	EIYGPESGGKTT	143
NTDB id 1334 RAOC RS04870 WP 004918236.1	EIYGPESGGKTT	150
NTDB id 169316 AUT26 RS06995 WP 021472659.1	EIYGPESGGKTT	143
NTDB id 1389 A4U84 RS07560 WP 021112712.1	EIYGPESGGKTT	158
NTDB id 1130 NGFG RS03960 WP 003688695.1	EIYGPESGGKTT	142
NTDB id 1124 NGFG RS03960 WP 003688695.1	EIYGPESGGKTT	142
NTDB id 1123 OK783 RS03845 WP 003688695.1	EIYGPESGGKTT	142
NTDB id 1427 RS RS02760 WP 011000510.1	EIYGPESGGKTT	150
NTDB id 1165 A1552VC RS01565 WP 000344154.1	EIYGPESGGKTT	141
NTDB id 1142 GTF74 RS11550 WP 000344154.1	EIYGPESGGKTT	141
NTDB id 1205 PSJM300 05545 AFN77183.1	EIYGPESGGKTT	141
NTDB id 1022 ACIAD RS06390 WP 004925639.1	EIYGPESGGKTT	141
NTDB id 1074 ABD1 RS10195 WP 000344167.1	EIYGPESGGKTT	141
consensus		

```

NTDB id 1313 DR RS12030 WP 010888966.1
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 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 169316 AUT26 RS06995 WP 021472659.1
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
consensus

```

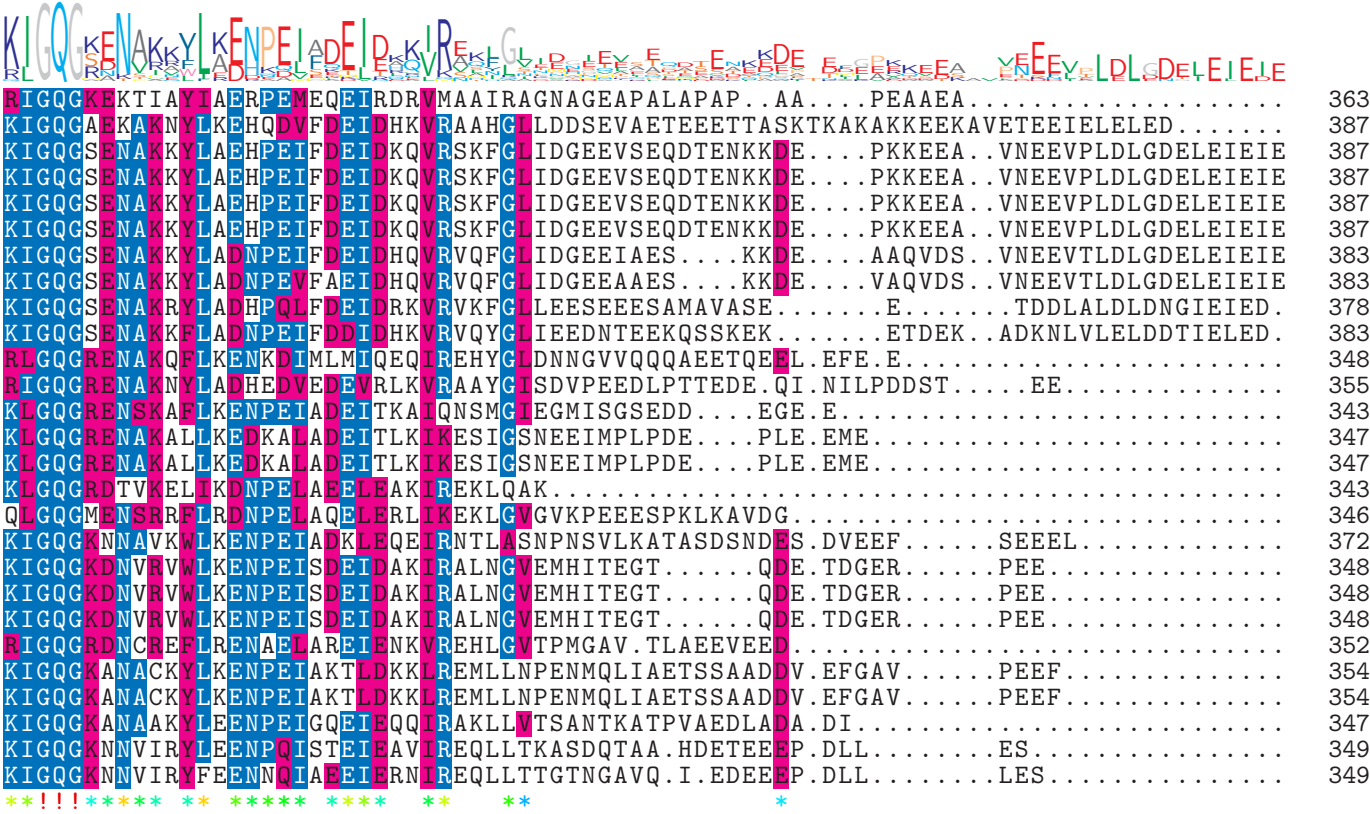


logo

NTDB id 1313 DR RS12030 WP 010888966.1	RLDVRKIGQ...PTKVGND	AVANTVKKIKTVKNKVAA	PFKEVELALVYGKGFDQLS	DLVGLAADMDIIKKAGS	FFYSYGD	309					
NTDB id 600 KW2 RS01765 WP 011675413.1	RLDVRGSTKIEEGS.GDNKTQ	IGKITKIKVVKNKVAPPF	KVALVDIMFGEGISST	GELLNIAVEEGIIKKS	GAWFAYNDE	314					
NTDB id 269 KZH43 RS08665 WP 001085462.1	RLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPF	KEAVVEIMYEGEGISKT	GELLKIASDLDIIKK	AGAWYSYKDE	313					
NTDB id 228 SPD RS09265 WP 001085462.1	RLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPF	KEAVVEIMYEGEGISKT	GELLKIASDLDIIKK	AGAWYSYKDE	313					
NTDB id 194 SPR RS08825 WP 001085462.1	RLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPF	KEAVVEIMYEGEGISKT	GELLKIASDLDIIKK	AGAWYSYKDE	313					
NTDB id 159 SP RS09750 WP 001085462.1	RLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPF	KEAVVEIMYEGEGISKT	GELLKIASDLDIIKK	AGAWYSYKDE	313					
NTDB id 499 SM12261 RS08315 WP 078228268.1	RLDVRGSTQIKGTG.DQKDTN	VGKETKIKVVKNKVAPPF	KEAFVEIMYEGEGISKT	GELLKIASDLDIIKK	AGAWYSYKDE	313					
NTDB id 527 SMSK321 RS11065 WP 001085454.1	RLDVRGSTQIKGTG.DQKDTN	VGKETKIKVVKNKVAPPF	KEAFVEIMYEGEGISKT	GELLKIASDLDIIKK	AGAWYSYKDE	313					
NTDB id 453 Spy49 1753c ACI62003.1	RLDVRGTTQIKGTG.DQKDS	IGKETKIKVVKNKVAPPF	KVAEVEIMYEGEGISRT	GELVKIASDLDIIQK	AGAWFSYNGE	313					
NTDB id 408 SMU RS09530 WP 002262392.1	RLDVRGNTQIKGTG.EQKDS	NIIGKETKIKVVKNKVAPPF	KEAFVEIITYEGEGISRT	GELVKIASDLGIIQK	AGAWFSYNGE	313					
NTDB id 115 BSU 16940 NP 389576.2	RLDVRRAEQLKQGN.....	DVMGNKTKIKVVKNKVAPPF	RRTAEVDIMYEGEGISKEGE	IIDLGTGELDIVQK	SGSWSYEEEE	294					
NTDB id 625 LCA RS02525 WP 011374196.1	RLDVRRAETIKNGT.....	DMIGNRARIKVVKNKVAPPF	KVAEVDIMYGGGISRT	GELVDMAVEKDIINK	SGSWSYGSE	296					
NTDB id 1245 Cj1673c YP 002345041.1	RLDVRKVAT....L.KQNE	EEPIGNRVKVVKNKVAPPF	RQAEFDMVFGEGLSREGEL	IDYGVKLDIVDKSG	AWFSYKDK	296					
NTDB id 1211 C694 RS00795 WP 000963128.1	RLDVRRIAS....L.KQNE	EQHIGNRAKVVKNKVAPPF	REAEFDIMFGEGISKEGE	IIDYGVKLDIVDKSG	AWLSYQDK	298					
NTDB id 1214 NCTC11637 00359 SQJ03206.1	RLDVRRIAS....L.KQNE	EQHIGNRAKVVKNKVAPPF	REAEFDIMFGEGISKEGE	IIDYGVKLDIVDKSG	AWLSYQDK	298					
NTDB id 1334 RAOC RS04870 WP 004918236.1	RLDVRRLSDTGKIKDKSGEV	IGNRTKVVKNKVAPPF	KSAEFDIMYEGGVSKVGE	ILDVATDLDIIQKSG	SWFSYQDT	309					
NTDB id 169316 AUT26 RS06995 WP 021472659.1	RLDVRRIQT....L.KEG	ADSVGNRTKAKIVKNKMAPPF	KIAEFDIIYGGGISREGGI	IDMGVEHGI	IKKSGSWFTYDGD	297					
NTDB id 1389 A4U84 RS07560 WP 021112712.1	RLDVRRCGV....V.KDG	DEIIGSETKVVKNKVAPPF	REVQFDIMYEGEGISRMNELL	ILAEANGFIKKS	GAWFYSYDGT	312					
NTDB id 1130 NGFG RS03960 WP 003688695.1	RLDVRRTGS....I.KKG	EEVLGNETRVKVIKNKVAPPF	RQAEFDILYEGEGISWEGEL	IDIGVKNDIINKSG	AWYSYNGA	296					
NTDB id 1124 NGFG RS03960 WP 003688695.1	RLDVRRTGS....I.KKG	EEVLGNETRVKVIKNKVAPPF	RQAEFDILYEGEGISWEGEL	IDIGVKNDIINKSG	AWYSYNGA	296					
NTDB id 1123 OK783 RS03845 WP 003688695.1	RLDVRRTGS....I.KKG	EEVLGNETRVKVIKNKVAPPF	RQAEFDILYEGEGISWEGEL	IDIGVKNDIINKSG	AWYSYNGA	296					
NTDB id 1427 RS RS02760 WP 011000510.1	RLDVRRIQS....I.KKG	DEVVGNETKVVKNKVAPPF	REAIFDILYGAGVSREGE	IIDLGVKAKVVEKSG	AWYSYNGE	304					
NTDB id 1165 A1552VC RS01565 WP 000344154.1	RLDVRRTGA....I.KEG	EEVVGNETRIKVVKNKIAAPF	KEANTQIMYGGGFNREGEL	IDLGVKHKMVEKSG	AWYSYNGD	295					
NTDB id 1142 GTF74 RS11550 WP 000344154.1	RLDVRRTGA....I.KEG	EEVVGNETRIKVVKNKIAAPF	KEANTQIMYGGGFNREGEL	IDLGVKHKMVEKSG	AWYSYNGD	295					
NTDB id 1205 PSJM300 05545 AFN77183.1	RLDVRRTGA....V.KEG	DEVVGSETRKVVKNKVAPPF	RQAEFQILYGGKIYRNGE	IIDLGVQQGLVEKSG	AWYAYKGS	295					
NTDB id 1022 ACIAD RS06390 WP 004925639.1	RLDVRRIQ....V.KEG	DEIIGSETKVVKNKMAPPF	REAIFQILYGGKVNQLGEL	VDLAVQQNIVQKAG	AWYSYQGN	295					
NTDB id 1074 ABD1 RS10195 WP 000344167.1	RLDVRRIQ....V.KEG	DEIVGSETKVVKNKMAPPF	KEAIFQILYGGKTNQLGEL	VDLAVQQDIVQKAG	AWYSYQGN	295					
consensus	!***!*	*	**	*****!***!!*!!*!	*	*****!*!***	*****	*	***	!	!*****!

logo

NTDB id 1313 DR RS12030 WP 010888966.1
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 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 169316 AUT26 RS06995 WP 021472659.1
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
consensus



logo

NTDB id 1313 DR RS12030 WP 010888966.1	.	363
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 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 169316 AUT26 RS06995 WP 021472659.1	.	346
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

consensus

 non conserved
 similar
 ≥ 50% conserved