

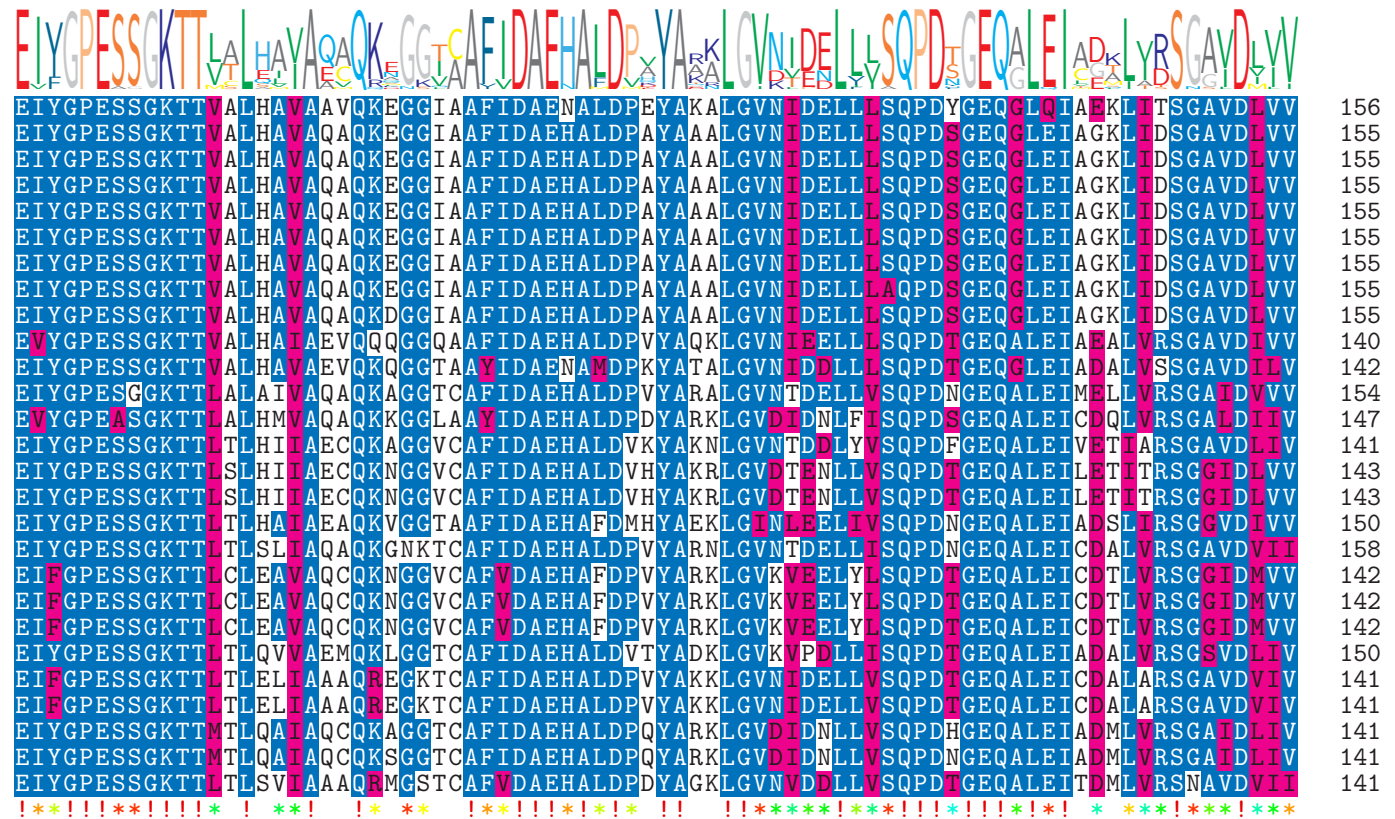
logo

NTDB id 600 KW2 RS01765 WP 011675413.1	MATKK...KTNFDDITKKYGAERDKALADALALIEKD FGKGSIMRLGEA.ANQKVSVVSSGSLALDIALGAGGYPKGRIV	76
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAKK...PKKLEEISKKFGAEREKALNDALKLIEKD FGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT	75
NTDB id 228 SPD RS09265 WP 001085462.1	.MAKK...PKKLEEISKKFGAEREKALNDALKLIEKD FGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT	75
NTDB id 194 SPR RS08825 WP 001085462.1	.MAKK...PKKLEEISKKFGAEREKALNDALKLIEKD FGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT	75
NTDB id 159 SP RS09750 WP 001085462.1	.MAKK...PKKLEEISKKFGAEREKALNDALKLIEKD FGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT	75
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAKK...PKKLDEISKKFGAEREKALNDALKLIEKD FGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT	75
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAKK...PKKLDEISKKFGAEREKALNDALKLIEKD FGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT	75
NTDB id 453 Spy49 1753c ACI62003.1	.MAKK...LKKNEEITKKFGDERRKALDDALKNIEKD FGKGAVMRLGER.AEQKVQVMSSGSLALDIALGAGGYPKGRIT	75
NTDB id 408 SMU RS09530 WP 002262392.1	.MAKR...IKKTEEITKKFGDERKKALDDALKNIEKD FGKGAVMRLGER.AEQKVQVMSSGSLALDIALGAGGYPKGRIV	75
NTDB id 115 BSU 16940 NP 389576.2	MSDRQAALDMALKQIEKQFGKGSIMKLGEK.TDTRISTVPSGSLALDTALGIGGYPGRIT	60
NTDB id 625 LCA RS02525 WP 011374196.1	MAKDERQAALDAALKKIEKNFGKGSIMRMGEK.VDTQVSTVSSGSLALDEALGVGGYPGRIV	62
NTDB id 1313 DR RS12030 WP 010888966.1	.MSK....DATKEISAPTDAKERSKATETAMSQIEKAFGKGSIMKLGAE.SKLDVQVVSTGSLSLDLALGVGGIPGRIT	74
NTDB id 99483 R2J75 RS00265 WP 243347206.1	MATANEQDDRLLKVLNRTLADIERSFSGKGAIMKLGDTLNMDGIDVISTGSLSLDAALGVGGVPKGRVV	67
NTDB id 1245 Cj1673c YP 002345041.1	MDDNKRKSLDAALKSLDKTFGKGTILRLGDK.EVEQIDSIGTGSVGLDLALGIGGVPGKRIT	61
NTDB id 1211 C694 RS00795 WP 000963128.1	MAIDEDKQKATISLAIKQIDKVFSGKGAIVRLGDK.QVEKIDSISTGSLGLDLALGIGGVPGKRIT	63
NTDB id 1214 NCTC11637 00359 SQJ03206.1	MAIDEDKQKATISLAIKQIDKVFSGKGAIVRLGDK.QVEKIDAISTGSLGLDLALGIGGVPGKRIT	63
NTDB id 1334 RAOC RS04870 WP 004918236.1	MAKTETTSPNDDKKKALAAVLEKLDKTYGKGTVMKLGDTVDHNIIEVIPSGSLGLDLALGVGGYPKGRIV	70
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKKSSKNNTVVVKQVEPEQKKQKALEAALAQIEKQFGKGSIMKLGQT.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	MDENKQKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGRIV	61
NTDB id 1142 GTF74 RS11550 WP 000344154.1	MDENKQKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGRIV	61
NTDB id 1022 ACIAD RS06390 WP 004925639.1	MDDNKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGRIV	61
NTDB id 1074 ABD1 RS10195 WP 000344167.1	MDENKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGRIT	61
NTDB id 1205 PSJM300 05545 AFN77183.1	MDENKKRALAAALGQIEKQFGKGAVMRMGDH.DRQAIPSIISTGSLGLDIALGIGGLPKGRIV	61
consensus	*** **	

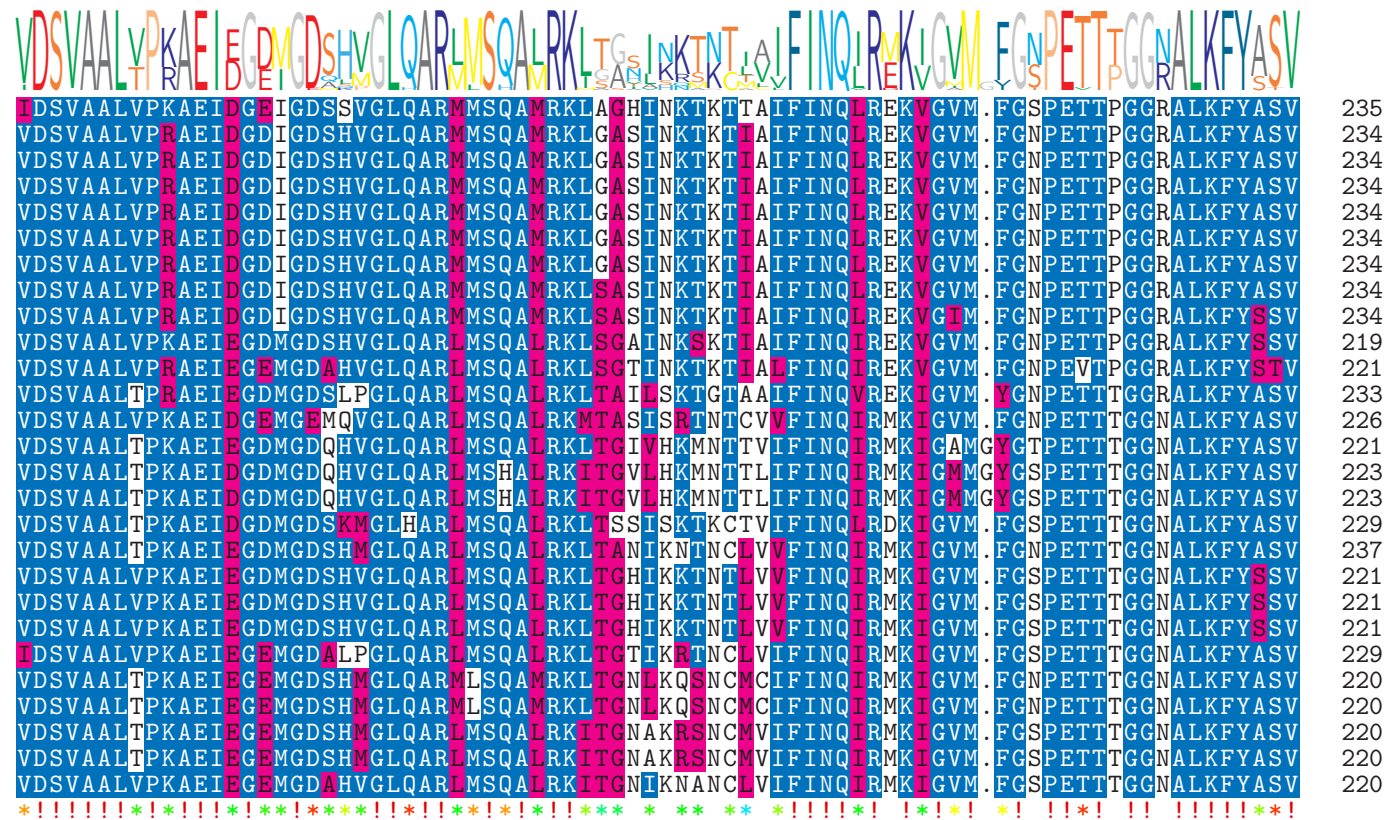
```

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 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 1313 DR RS12030 WP 010888966.1
NTDB id 99483 R2J75 RS00265 WP 243347206.1
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 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

```



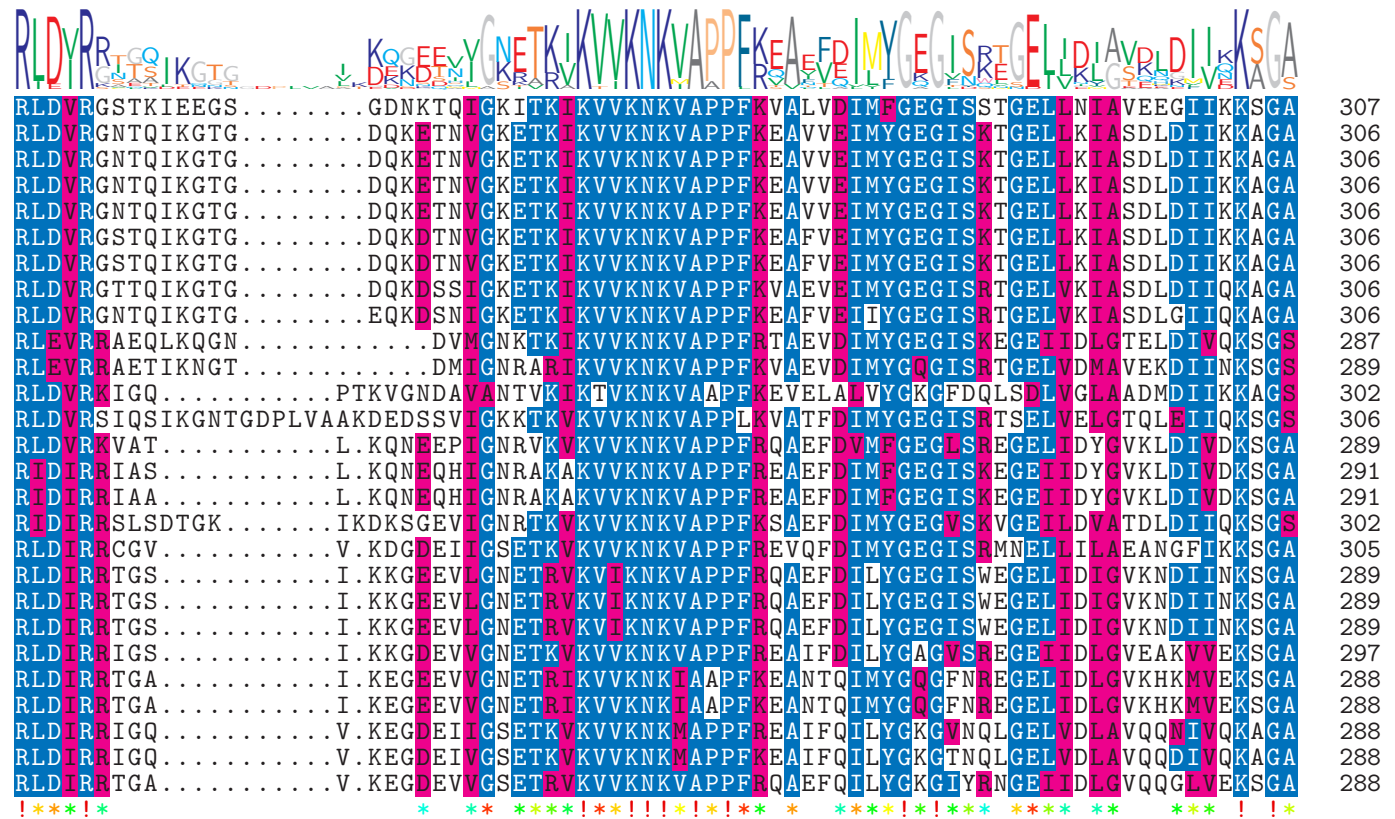
NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 453 Spy49 1753c 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 1313 DR RS12030 WP 010888966.1
NTDB id 99483 R2J75 RS00265 WP 243347206.1
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 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 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 1313 DR RS12030 WP 010888966.1
NTDB id 99483 R2J75 RS00265 WP 243347206.1
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 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	WFAYNDEKIGQGA	EKA	KNYLKEHQDV	FDEIDHKVRAAHGL	LDDSEVAETEEETT	ASKTKAKAKKEEK	AVETEEIELELED	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	WYSYKDEKIGQGS	ENAKK	YLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENK	KDE...PKKEEA..	VNEEVPLDLGD	380
NTDB id 228 SPD RS09265 WP 001085462.1	WYSYKDEKIGQGS	ENAKK	YLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENK	KDE...PKKEEA..	VNEEVPLDLGD	380
NTDB id 194 SPR RS08825 WP 001085462.1	WYSYKDEKIGQGS	ENAKK	YLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENK	KDE...PKKEEA..	VNEEVPLDLGD	380
NTDB id 159 SP RS09750 WP 001085462.1	WYSYKDEKIGQGS	ENAKK	YLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENK	KDE...PKKEEA..	VNEEVPLDLGD	380
NTDB id 499 SM12261 RS08315 WP 078228268.1	WYSYKDEKIGQGS	ENAKK	YLAENPEIF	DEIDHQVRVQFGL	IDGEEIAES...KKDE...	AAQVDS..	VNEEVTLDLGD	376
NTDB id 527 SMSK321 RS11065 WP 001085454.1	WYSYKDEKIGQGS	ENAKK	YLAENPEVFAEIDHQVRVQFGL	IDGEEAAES...KKDE...	VAQVDS..	VNEEVTLDLGD	376	
NTDB id 453 Spy49 1753c ACI62003.1	WFSYNGEKIGQGS	ENAKR	YLADHPQLFDEIDRKVRVKFGL	LEESEESAMAVASE.....E.....	TDDLALDLDN	372		
NTDB id 408 SMU RS09530 WP 002262392.1	WYSYNGEKIGQGS	ENAKK	FLADNPEIFDDIDHKVVRVQYGL	IEEDNTEEKQSSKEK.....ETDEK..	ADKNLVLELDD	377		
NTDB id 115 BSU 16940 NP 389576.2	WYSYEEEE	RLGQGR	ENAKQFLKENKD	IMLMIQEQIREHYGL	DNNGVVQQQAEETQEEL.EFE.E.....	348		
NTDB id 625 LCA RS02525 WP 011374196.1	WYSYGSE	RIGQGR	ENAKNYLADHEDVEDEVRLKVR	AAYGISDVPEEDLPTTEDE.QI.NILPDDST.....EE.....	355			
NTDB id 1313 DR RS12030 WP 010888966.1	FYSYGDER	RIGQGR	KEKTIA	YTAERPMEQEIRDRVMAAIRAGNAGEAPALAPAPAAPEAAE..A.....	363			
NTDB id 99483 R2J75 RS00265 WP 243347206.1	WYSYKDS	RLGQGA	ENVKKLFADNPELADEVEGLTRAKVGL	RA.....	348			
NTDB id 1245 Cj1673c YP 002345041.1	WFSYKDK	KLGGGR	ENSKAFLKENPEIADEITKAIQNSMG	IEGMI....SGSEDD..EGE..E.....	343			
NTDB id 1211 C694 RS00795 WP 000963128.1	WLSYQDK	KLGGGR	ENAKALLKEDKALADEITLTKESIGS	NEEI....MPLPDE..PLE..EME.....	347			
NTDB id 1214 NCTC11637 00359 SQJ03206.1	WLSYQDK	KLGGGR	ENAKALLKEDKALADEITLTKESIGS	NEEI....MPLPDE..PLE..EME.....	347			
NTDB id 1334 RAOC RS04870 WP 004918236.1	WFSYQDT	KLGGGR	DTV	KELIKDNPELAEELEAKIREKLQAK.....	343			
NTDB id 1389 A4U84 RS07560 WP 021112712.1	WFSYDGT	KIGQGR	KNNAVKWLKENPEIADKLEQEIRNTLASNPNS....VLKATASDSND..ESDV	EEFSEEL.....	372			
NTDB id 1130 NGFG RS03960 WP 003688695.1	WYSYNGA	KIGQGR	KDNVRVWLKENPEISDEIDAKIRALNGVEMHI....TEGTQDET	DGE..R.....PEE.....	348			
NTDB id 1124 NGFG RS03960 WP 003688695.1	WYSYNGA	KIGQGR	KDNVRVWLKENPEISDEIDAKIRALNGVEMHI....TEGTQDET	DGE..R.....PEE.....	348			
NTDB id 1123 OK783 RS03845 WP 003688695.1	WYSYNGA	KIGQGR	KDNVRVWLKENPEISDEIDAKIRALNGVEMHI....TEGTQDET	DGE..R.....PEE.....	348			
NTDB id 1427 RS RS02760 WP 011000510.1	WYSYNGE	RIGQGR	DNCR	REFLRENAELAREIENKVRHLGVTPMG....AVTLA.EEVEE..D.....	352			
NTDB id 1165 A1552VC RS01565 WP 000344154.1	WYSYNGD	KIGQGR	KANACKYLLKENPEIAKTLDKKLREMLLN	NPENM....QLIAETSSAAD..DVEFGAV	PEEF.....	354		
NTDB id 1142 GTF74 RS11550 WP 000344154.1	WYSYNGD	KIGQGR	KANACKYLLKENPEIAKTLDKKLREMLLN	NPENM....QLIAETSSAAD..DVEFGAV	PEEF.....	354		
NTDB id 1022 ACIAD RS06390 WP 004925639.1	WYSYQGN	KIGQGR	KNNVIRYFEEN	NQIAEEIERNIREQLLT	TKASD....QTAA.HDETEE..EPDLL..ES.....	349		
NTDB id 1074 ABD1 RS10195 WP 000344167.1	WYSYQGN	KIGQGR	KNNVIRYFEEN	NQIAEEIERNIREQLLT	TKASD....GAVQ.I.EDEE..EPDLL..LES.....	349		
NTDB id 1205 PSJM300 05545 AFN77183.1	WYAYKGS	KIGQGR	KANA	AKYLEENPEIGQIEEQIRAKLLVTSAN....TKATPVAEDLA..DADI.....	347			
consensus	***!	**!!!	*****	**	*****	*****	**	**

logo

		ELELEE	
NTDB id 600 KW2 RS01765 WP 011675413.1	.....		387
NTDB id 269 KZH43 RS08665 WP 001085462.1	ELEIEIEE		388
NTDB id 228 SPD RS09265 WP 001085462.1	ELEIEIEE		388
NTDB id 194 SPR RS08825 WP 001085462.1	ELEIEIEE		388
NTDB id 159 SP RS09750 WP 001085462.1	ELEIEIEE		388
NTDB id 499 SM12261 RS08315 WP 078228268.1	ELEIEIEE		384
NTDB id 527 SMSK321 RS11065 WP 001085454.1	ELEIEIEE		384
NTDB id 453 Spy49 1753c ACI62003.1	GIEIED..		378
NTDB id 408 SMU RS09530 WP 002262392.1	TIELED..		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 99483 R2J75 RS00265 WP 243347206.1	.....		348
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 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