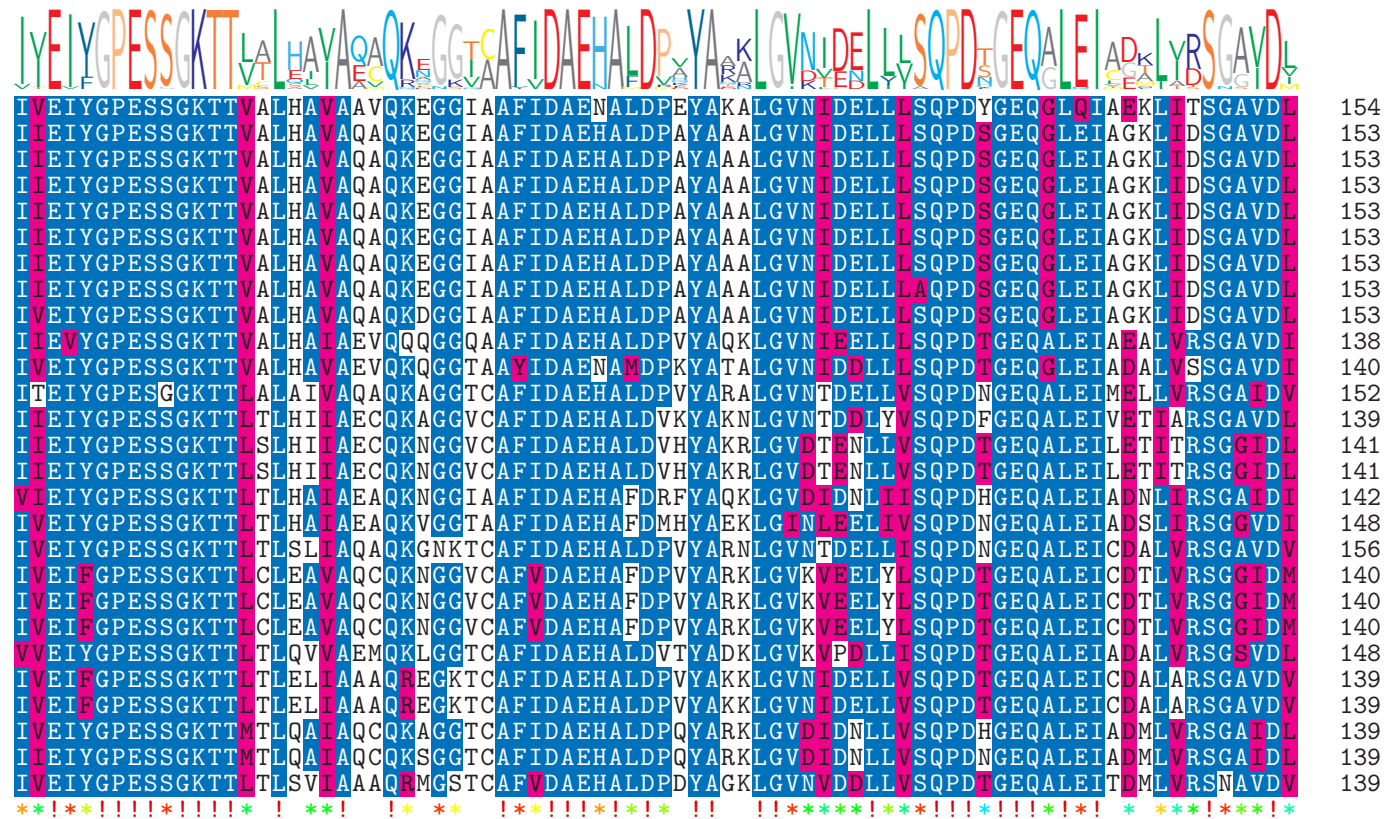


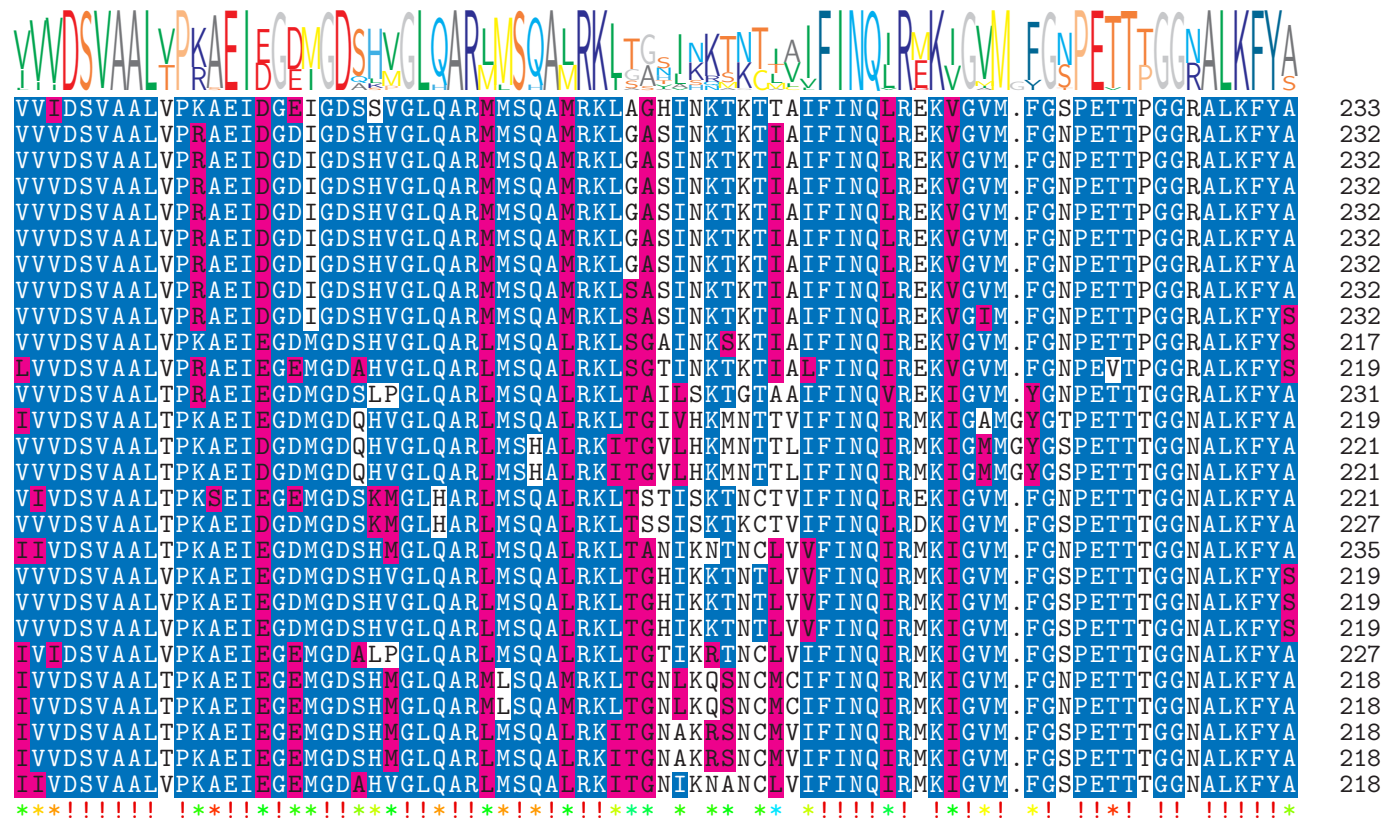

```

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 1245 Cj1673c YP 002345041.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 142013 VC82 RS07040 WP 045801752.1
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 OKF783 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 1245 Cj1673c YP 002345041.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 142013 VC82 RS07040 WP 045801752.1
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	SVRLDVRGST...KIEEGSGDNKTQIGKITKIKVVKNKVAPPFKVALVDIMF	GEGISSTGELINIAVEEGITIKKSGAWF	309								
NTDB id 269 KZH43 RS08665 WP 001085462.1	SVRLDVRGNT...QIKGTGDQKETNVGKETKIKVVKNKVAPPFKEAVVEIMY	GEGISKTGELLKIASDLDI IKKAGAWY	308								
NTDB id 228 SPD RS09265 WP 001085462.1	SVRLDVRGNT...QIKGTGDQKETNVGKETKIKVVKNKVAPPFKEAVVEIMY	GEGISKTGELLKIASDLDI IKKAGAWY	308								
NTDB id 194 SPR RS08825 WP 001085462.1	SVRLDVRGNT...QIKGTGDQKETNVGKETKIKVVKNKVAPPFKEAVVEIMY	GEGISKTGELLKIASDLDI IKKAGAWY	308								
NTDB id 159 SP RS09750 WP 001085462.1	SVRLDVRGNT...QIKGTGDQKETNVGKETKIKVVKNKVAPPFKEAVVEIMY	GEGISKTGELLKIASDLDI IKKAGAWY	308								
NTDB id 499 SM12261 RS08315 WP 078228268.1	SVRLDVRGST...QIKGTGDQKDTNVGKETKIKVVKNKVAPPFKEAFVEIMY	GEGISKTGELLKIASDLDI IKKAGAWY	308								
NTDB id 527 SMSK321 RS11065 WP 001085454.1	SVRLDVRGST...QIKGTGDQKDTNVGKETKIKVVKNKVAPPFKEAFVEIMY	GEGISKTGELLKIASDLDI IKKAGAWY	308								
NTDB id 453 Spy49 1753c ACI62003.1	SVRLDVRGTT...QIKGTGDQKDSSIGKETKIKVVKNKVAPPFKVAEVEIMY	GEGISRTGELVKIASDLDI IQKAGAWF	308								
NTDB id 408 SMU RS09530 WP 002262392.1	SVRLDVRGNT...QIKGTGEQKDSNIGKETKIKVVKNKVAPPFKEAFVEI	IYGEGISRTGELVKIASDLGI IQKAGAWY	308								
NTDB id 115 BSU 16940 NP 389576.2	SVRLEVRRAE...QLKQGN...DVMGNKTKIKVVKNKVAPPFRTAEVDIMY	GEGISKEGEIIDLGTEL DIVQKSGSWY	289								
NTDB id 625 LCA RS02525 WP 011374196.1	TVRLEVRRAE...TIKNGT...DMIGNRARIKVVKNKVAPPFKVAEVDIMY	GQGISRTGELVDMAVEKDI INKSGSWY	291								
NTDB id 1313 DR RS12030 WP 010888966.1	SVRLDVRKIG...QPTK...VGNDAVANTVKKIKTVKNKVAAPFKEVELALVY	GKGFQDLSDLVGLAADMDI IKKAGSFY	304								
NTDB id 1245 Cj1673c YP 002345041.1	SVRLDVRKVA...TLK...QNEETIGNRVKVKKVKNKVAPPFRQA	EFDVMFGEGLSREGELIDYGVKLDIVDKSGAWF	291								
NTDB id 1214 NCTC11637 00359 SQJ03206.1	SVRIDIRRIA...ALK...QNEQHIGNRAKAKVVKNKVAPPFREAEFDDIMF	GEGISKEGEIIDYGVKLDIVDKSGAWL	293								
NTDB id 1211 C694 RS00795 WP 000963128.1	SVRIDIRRIA...SLK...QNEQHIGNRAKAKVVKNKVAPPFREAEFDDIMF	GEGISKEGEIIDYGVKLDIVDKSGAWL	293								
NTDB id 142013 VC82 RS07040 WP 045801752.1	SVRLDIRRST...QIKD...TDGNVQGNKTRVKVVKNKVAPPFKTA	EFDIMYGEGISKVGEILD LGVAIEIVKKS	SGSWF	294							
NTDB id 1334 RAOC RS04870 WP 004918236.1	SVRIDIRSLSDTGKIKD...KSGEVIGNRTKVKKVKNKVAPPFKSA	EFDIMYGEGVSKVGEILD VATDLDI IQKSGSWF	304								
NTDB id 1389 A4U84 RS07560 WP 021112712.1	SVRLDIRRCG...VVK...DGDDEIIGSETKVKKVKNKVAPPFREVQFDIMY	GEGISRMNELLILA EANGFIKKSGAWF	307								
NTDB id 1130 NGFG RS03960 WP 003688695.1	SVRLDIRRTG...SIK...KGEEVLGNETRVKVIKNKVAPPFRQA	EFDILYGEGISWEGELIDIGVKNDI INKSGAWY	291								
NTDB id 1124 NGFG RS03960 WP 003688695.1	SVRLDIRRTG...SIK...KGEEVLGNETRVKVIKNKVAPPFRQA	EFDILYGEGISWEGELIDIGVKNDI INKSGAWY	291								
NTDB id 1123 OK783 RS03845 WP 003688695.1	SVRLDIRRTG...SIK...KGEEVLGNETRVKVIKNKVAPPFRQA	EFDILYGEGISWEGELIDIGVKNDI INKSGAWY	291								
NTDB id 1427 RS RS02760 WP 011000510.1	SVRLDIRRIG...SIK...KGDEVVGNETKVKKVKNKVAPPFREAI	FDDILYAGVSRGEIID LGVEAKVVEKSGAWY	299								
NTDB id 1165 A1552VC RS01565 WP 000344154.1	SVRLDIRRTG...AIK...EGEEVVGNETRIKVVKNKIAAPFKEANTQIMY	GQGFNREGELID LGVKHKMVEKSGAWY	290								
NTDB id 1142 GTF74 RS11550 WP 000344154.1	SVRLDIRRTG...AIK...EGEEVVGNETRIKVVKNKIAAPFKEANTQIMY	GQGFNREGELID LGVKHKMVEKSGAWY	290								
NTDB id 1022 ACIAD RS06390 WP 004925639.1	SVRLDIRRIG...QVK...EGDEIIGSETKVKKVKNKMAPPFREAI	FQILYGKGVNQLGELVDLAVQQDIVQKAGAWY	290								
NTDB id 1074 ABD1 RS10195 WP 000344167.1	SVRLDIRRIG...QVK...EGDEIIGSETKVKKVKNKMAPPFREAI	FQILYGKGTNQLGELVDLAVQQDIVQKAGAWY	290								
NTDB id 1205 PSJM300 05545 AFN77183.1	SVRLDIRRTG...AVK...EGDEVVGS	ETRVKKVKNKVAPPFRQA EFDILYGKGIYRNGEIID LGVQQGLVEKSGAWY	290								
consensus	*!!**!* *	**	*	**	*****!!!!!!*!!* *	*****!!*!***	*****	**	***	!	!***

logo

NTDB id 600 KW2 RS01765 WP 011675413.1	AYNDEKIGQGA	EKAKNYLKEHQDV	FDEIDHKVRAAHG	LDDSEVAETEEETT	ASKTKAKAKKEEK	AVETEEIELELED	..	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	SYKDEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	..VNEEVPLDLGDEL		382
NTDB id 228 SPD RS09265 WP 001085462.1	SYKDEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	..VNEEVPLDLGDEL		382
NTDB id 194 SPR RS08825 WP 001085462.1	SYKDEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	..VNEEVPLDLGDEL		382
NTDB id 159 SP RS09750 WP 001085462.1	SYKDEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE....PKKEEA	..VNEEVPLDLGDEL		382
NTDB id 499 SM12261 RS08315 WP 078228268.1	SYKDEKIGQGS	ENAKKYLAENPEIF	DEIDHQVRVQFGL	IDGEEIAES....	KKDE....AAQVDS	..VNEEVTLDLGDEL		378
NTDB id 527 SMSK321 RS11065 WP 001085454.1	SYKDEKIGQGS	ENAKKYLAENPEV	FAEIDHQVRVQFGL	IDGEEAAES....	KKDE....VAQVDS	..VNEEVTLDLGDEL		378
NTDB id 453 Spy49 1753c ACI62003.1	SYNGEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEESAMAVASE	E.....	TDDLALDLNGI		374
NTDB id 408 SMU RS09530 WP 002262392.1	SYNGEKIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEEDNTEEKQSSKEK	ETDEK	..ADKNLVLELDDTI		379
NTDB id 115 BSU 16940 NP 389576.2	SYEEEE	RLGQGR	ENAKQFLKENKD	IMLMIQEQIREHYGL	DNNGVVQQAEETQEEL	.EFE.E.....		348
NTDB id 625 LCA RS02525 WP 011374196.1	SYGSE	RIGQGR	ENAKNYLADHEDVE	DEVRLKVRAAYGIS	SDVPEEDLPTTEDE	.QI.NILPDDST....	EE.....	355
NTDB id 1313 DR RS12030 WP 010888966.1	SYGDER	RIGQGKEKTI	AYTAE	RPEMEQEIRDRV	MAAIRAGNAGEAP	ALAPAPAAPEAAE	..A.....	363
NTDB id 1245 Cj1673c YP 002345041.1	SYKDK	KLGGGR	ENSKAFLKENPEI	ADEITKAIQNSMCI	EGMI.....SGSEDD	..EGE..E.....		343
NTDB id 1214 NCTC11637 00359 SQJ03206.1	SYQDK	KLGGGR	ENAKALLKEDKAL	ADEITLKI	KESIGSNEEI....	MPLPDE..PLE..EME	.....	347
NTDB id 1211 C694 RS00795 WP 000963128.1	SYQDK	KLGGGR	ENAKALLKEDKAL	ADEITLKI	KESIGSNEEI....	MPLPDE..PLE..EME	.....	347
NTDB id 142013 VC82 RS07040 WP 045801752.1	SYGDT	KLGGGR	DAVKALLQDNPEL	SEELEGGIK	EAIASL.....			333
NTDB id 1334 RAOC RS04870 WP 004918236.1	SYQDT	KLGGGR	DTV	KELTKDNPEL	AEELEAKIREKLQAK	.....		343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	SYDGT	KIGQGG	KNNAVKWLKENPEI	ADKLEQEIRNTLAS	NPNS....VLKATASDSND	..ESDVVEEFSEEEL	.....	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	SYNGAK	IIGQGG	KDNVRVWLKENPEIS	DEIDAKIRALNGVEMHI	TEGTQDET	DGE..R.....PEE	.....	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	SYNGAK	IIGQGG	KDNVRVWLKENPEIS	DEIDAKIRALNGVEMHI	TEGTQDET	DGE..R.....PEE	.....	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	SYNGAK	IIGQGG	KDNVRVWLKENPEIS	DEIDAKIRALNGVEMHI	TEGTQDET	DGE..R.....PEE	.....	348
NTDB id 1427 RS RS02760 WP 011000510.1	SYNGER	RIGQGR	DNCREFLRENAEL	AREIENKVREHLGV	TPMG....AVTLA	.EEVEE..D.....		352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	SYNGD	KIGQGG	KANACKYLLKENPEI	AKTLDKKLREMLLN	NPENM....QLIAETSSAAD	..DVEFGAVPEEF	.....	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	SYNGD	KIGQGG	KANACKYLLKENPEI	AKTLDKKLREMLLN	NPENM....QLIAETSSAAD	..DVEFGAVPEEF	.....	354
NTDB id 1022 ACIAD RS06390 WP 004925639.1	SYQGN	KIGQGG	KNNVIRYLEENPQISTE	IEAVIREQLLTKASD	QTAA.HDETEE	..EPDLL..ES	.....	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	SYQGN	KIGQGG	KNNVIRYFEENNQIAEEI	ERNIREQLLTTGTN	GAVQ.I.EDEE	..EPDLL..LES	.....	349
NTDB id 1205 PSJM300 05545 AFN77183.1	AYKGS	KIGQGG	KANAACYLEENPEIGQEIE	QQIRAKLLVTSAN	TKATPVAEDLA	..DADI	.....	347
consensus	*!	**!!!!*****	* * *****	*****	*****	* *	* *	

logo

	E	I	E	E	E	
NTDB id 600 KW2 RS01765 WP 011675413.1	.....					387
NTDB id 269 KZH43 RS08665 WP 001085462.1	EIEIEE					388
NTDB id 228 SPD RS09265 WP 001085462.1	EIEIEE					388
NTDB id 194 SPR RS08825 WP 001085462.1	EIEIEE					388
NTDB id 159 SP RS09750 WP 001085462.1	EIEIEE					388
NTDB id 499 SM12261 RS08315 WP 078228268.1	EIEIEE					384
NTDB id 527 SMSK321 RS11065 WP 001085454.1	EIEIEE					384
NTDB id 453 Spy49 1753c ACI62003.1	EIED..					378
NTDB id 408 SMU RS09530 WP 002262392.1	ELED..					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 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 142013 VC82 RS07040 WP 045801752.1	.....					333
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