

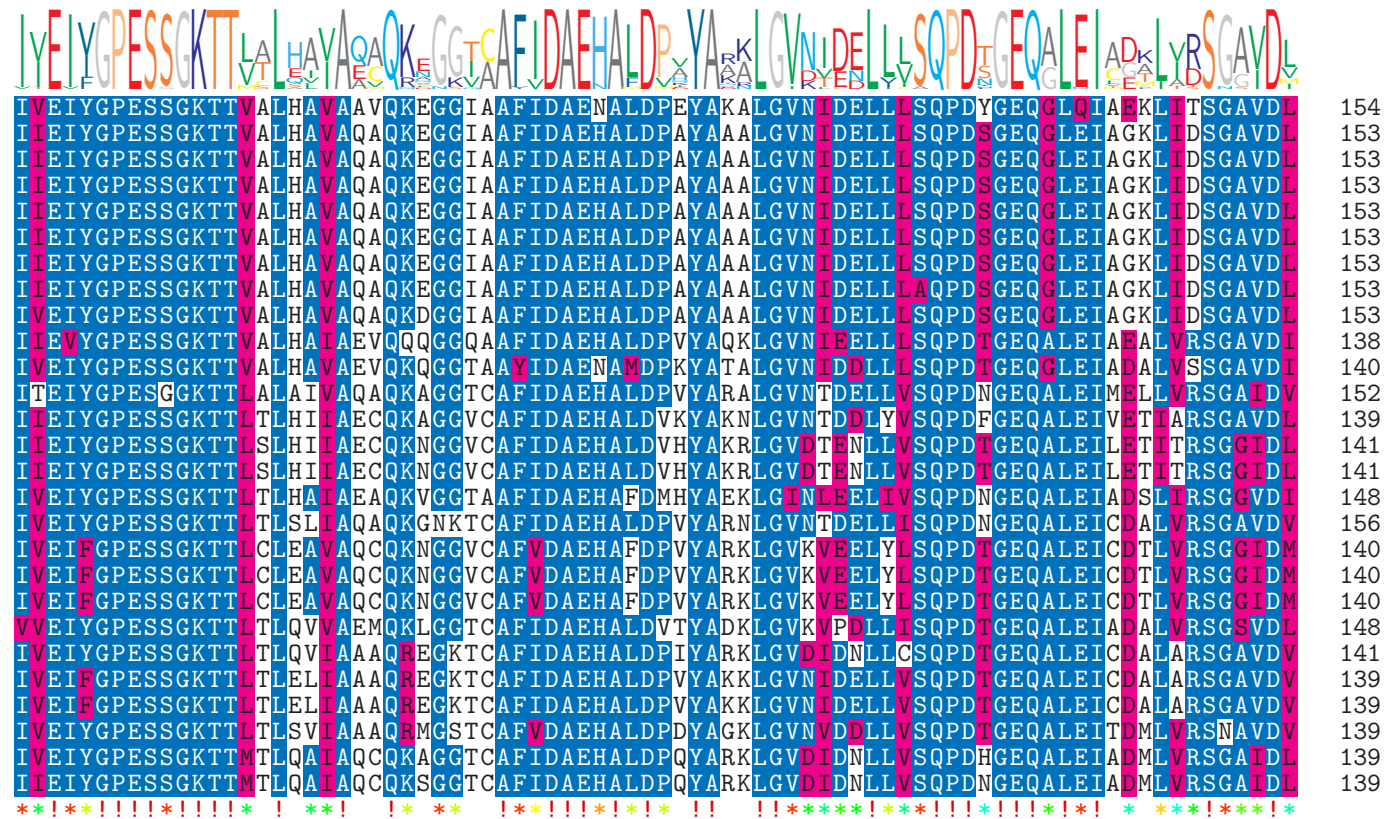
logo

NTDB id 600 KW2 RS01765 WP 011675413.1	MATKKK....TNFDDITKKYGA	ERDKALADALALIEKD	FGKGSIMRLGEA	.ANQKVS	VSSGSLALD	I	ALGAGGY	PKGR	74	
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAKKP....KKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 228 SPD RS09265 WP 001085462.1	.MAKKP....KKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 194 SPR RS08825 WP 001085462.1	.MAKKP....KKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 159 SP RS09750 WP 001085462.1	.MAKKP....KKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAKKP....KKLDEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAKKP....KKLDEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 453 Spy49 1753c ACI62003.1	.MAKKL....KKNEEITKKFG	DERRKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQV	MSSGSLALD	I	ALGAGGY	PKGR	73	
NTDB id 408 SMU RS09530 WP 002262392.1	.MAKRI....KKTEEITKKFG	DERKKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQV	MSSGSLALD	I	ALGAGGY	PKGR	73	
NTDB id 115 BSU 16940 NP 389576.2	MSDRQAALDMALK	QIEKQFGKGSIMKLGEK	.TDTRIST	VP	SGSLALD	T	ALGIGGY	PRGR	58	
NTDB id 625 LCA RS02525 WP 011374196.1	MAKDERQAALDA	ALKKIEKNFGKGSIMRMGEK	.VDTQVST	VSSGSLAL	DEALGV	GGYPRGR			60	
NTDB id 1313 DR RS12030 WP 010888966.1	MSKDATKEISAPTD	AKERSKATETAMSQIEKA	FGKGSIMKLGAE	.SKLDVQV	VSTGSLSLD	I	ALGVGGI	PRGR	72	
NTDB id 1245 Cj1673c YP 002345041.1	MDDNKRKSLDA	ALKSLDKTIFGKGTILRLGDK	.EVEQIDS	IGTGSVGLD	I	ALGIGGV	PKGR		59	
NTDB id 1214 NCTC11637 00359 SQJ03206.1	MAIDEDKQKAI	SLAIKQIDKVF	FGKGALVRLGDK	.QVEKIDA	ISTGSLGLD	I	ALGIGGV	PKGR	61	
NTDB id 1211 C694 RS00795 WP 000963128.1	MAIDEDKQKAI	SLAIKQIDKVF	FGKGALVRLGDK	.QVEKIDS	ISTGSLGLD	I	ALGIGGV	PKGR	61	
NTDB id 1334 RAOC RS04870 WP 004918236.1	MAKT..ETTS	PNDDKKKALAAVLEK	LDKTYGKGTVMKLG	DGTVDHNI	EVIP	SGSLGLD	I	ALGVGGY	PKGR	68
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKKSSKNNTV..VKQ	VEPEQKKQALEAALA	QIEKQFGKGSIMKLGQT	.EQLDIES	VSTGSLGLD	I	ALGIGGL	PMGR	76	
NTDB id 1130 NGFG RS03960 WP 003688695.1	MSDDKSKALAAALA	QIEKSFGKGAIMKMDGS	QREENLEVIST	GSLGLD	I	ALGVGGL	PRGR		60	
NTDB id 1124 NGFG RS03960 WP 003688695.1	MSDDKSKALAAALA	QIEKSFGKGAIMKMDGS	QREENLEVIST	GSLGLD	I	ALGVGGL	PRGR		60	
NTDB id 1123 OK783 RS03845 WP 003688695.1	MSDDKSKALAAALA	QIEKSFGKGAIMKMDGS	QREENLEVIST	GSLGLD	I	ALGVGGL	PRGR		60	
NTDB id 1427 RS RS02760 WP 011000510.1	.MED.....GK..KAAS	MSAEKQKALAAALA	QIEKQFGKGSIMKMDA	.EVEPVQV	VSTGSLGLD	I	ALGVGGL	PRGR	68	
NTDB id 255641 CU080 RS09505 WP 000963143.1	MAIDENKQKALAAAL	GQIEKQFGKGSIMRLGED	.RSMDVET	ISTGSLSLD	I	ALGAGGL	PMGR		61	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	MDENKQKALAAAL	GQIEKQFGKGSIMRLGDN	.RAMDVET	ISTGSLSLD	I	ALGAGGL	PMGR		59	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	MDENKQKALAAAL	GQIEKQFGKGSIMRLGDN	.RAMDVET	ISTGSLSLD	I	ALGAGGL	PMGR		59	
NTDB id 1205 PSJM300 05545 AFN77183.1	MDENKKRALAAAL	GQIEKQFGKGAVMRMGD	H.DRQAIPS	ISTGSLGLD	I	ALGIGGL	PKGR		59	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	MDDNKSKALQAALS	QIEKQFGKNTVMRLGDN	.TVQAVEA	VSTGSLTLD	I	ALGIGGL	PKGR		59	
NTDB id 1074 ABD1 RS10195 WP 000344167.1	MDENKSKALQAALS	QIEKQFGKNTVMRLGDN	.TVQAVEA	VSTGSLTLD	I	ALGIGGL	PKGR		59	
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 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 255641 CU080 RS09505 WP 000963143.1
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 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
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 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 255641 CU080 RS09505 WP 000963143.1
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 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

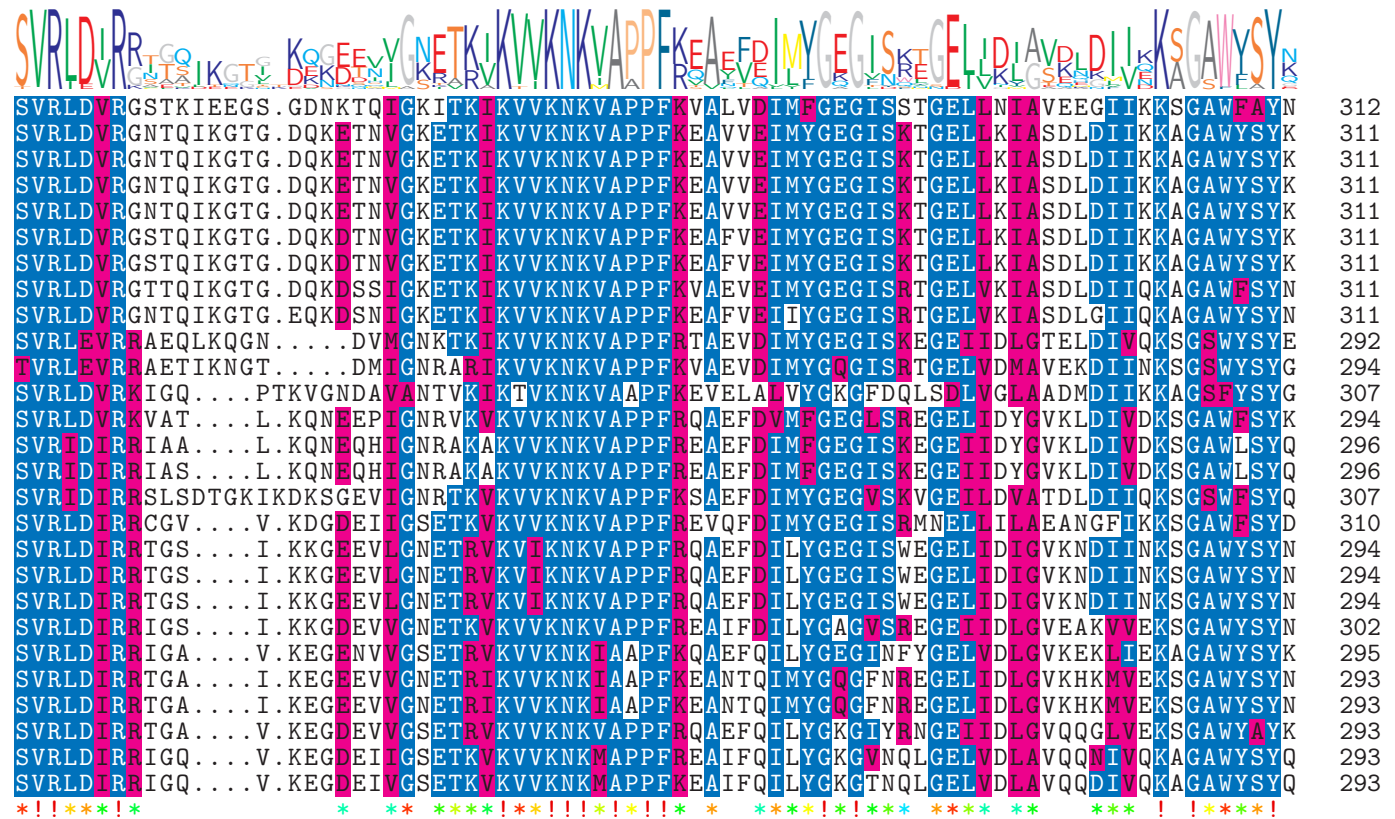
```



```

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 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 255641 CU080 RS09505 WP 000963143.1
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 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
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 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 255641 CU080 RS09505 WP 000963143.1
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

```

Sequence	Score
DEKIGGGAEKAKNYLKEHQDVFEIDHKVRAAHGLDDSEVAETEEETTASKTAKAKKKEKAVETEEIELELED....	387
DEKIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGGLIDGEEVSEQDTENKKDE...PKKEEA..VNEEVPLDLGDELEIE	385
DEKIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGGLIDGEEVSEQDTENKKDE...PKKEEA..VNEEVPLDLGDELEIE	385
DEKIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGGLIDGEEVSEQDTENKKDE...PKKEEA..VNEEVPLDLGDELEIE	385
DEKIGQGSENAKKYLAHNPEIFDEIDHQRVVFGLIDGEEIAES...KKDE...AAQVDS..VNEEVTLDLGDLEIE	381
DEKIGQGSENAKKYLAHNPEVFAEIDHQRVVFGLIDGEEIAES...KKDE...VAQVDS..VNEEVTLDLGDLEIE	381
GEKIGQGSENAKRYLADHPQLFDEIDRKVRVKFGLLEESEESAMAVASE.....E.....TDDLALDLNGIEIE	377
GEKIGQGSENAKKFLADNPEIFDDIDHKVRVQYGLIEEDNTEEKQSSKEK.....ETDEK..ADKNLVLELDDTIELE	382
EERLGGGRENAAKQFLKENKDIMLMIQEQIREHYGLDNGGVVQQAEETQEEL.EFE.E.....	348
SERIGGGRENAAKNYLADHEDVEDEVRLKVRVAAAYGISDVPEEDLPTTEDE.QI.NILPDDST....EE.....	355
DERIGGQKEKTIATYIAERPMEQEIRDRVMAAIRAGNAGEAPALAPAPAAPEAA...EA.....	363
DKKLGGGRENKAFLENPEIADEITKATINSMGTIEGM.....ISGSEDDEG.....EE.....	343
DKKLGGGRENAAKALLKEDKALADEITLKIKESIGSNEE....IMPLPDEPL.....EEME.....	347
DKKLGGGRENAAKALLKEDKALADEITLKIKESIGSNEE....IMPLPDEPL.....EEME.....	347
DTKLGGGRDTPVKELIKDNPELAEELEAKIREKLQAK.....	343
GTKIGQGKNNNAVKWLKENPEIADKLEQIRNTLASNPN....SVLKATASDSN...DES.DVEEFSEEL	372
GAKIGGQKDNVRVWLKENPEISDEIDAKIRALNGVEMH....ITEG.....T...QDETGDGERPEE	348
GAKIGGQKDNVRVWLKENPEISDEIDAKIRALNGVEMH....ITEG.....T...QDETGDGERPEE	348
GAKIGGQKDNVRVWLKENPEISDEIDAKIRALNGVEMH....ITEG.....T...QDETGDGERPEE	348
GERIGGGRDNCREFLRNAAELAREIENKVRHLGVTPM.....GAVTLAEE.VE...ED.....	352
GEKIGGQKANATAWLKDNPETAKIEKKVRELLNSNP....STPDFSV..D..DSEGVATNEDF	353
GDKIGGQKANACKYLKENPEIAKTLDKKLREMLLNPN....MQLIAETSSAA..DDVEFGAVPEEF	354
GDKIGGQKANACKYLKENPEIAKTLDKKLREMLLNPN....MQLIAETSSAA..DDVEFGAVPEEF	354
GSKIGGQKANAAKYLEENPEIGQIEEQIRAKLLVTSA....NTKATPVAEDL..ADADI.....	347
GNKIGGQKNNVIRYLEENPQISTEIEAVIREQLLTKAS....DQTAA.HDETE...EEDPLLLES	349
GNKIGGQKNNVIRIFYENNQIAEIERNIEREQLLTGT....NGAVQ.I.EDE...EEDPLLLES	349

logo

		IEE	
NTDB id 600 KW2 RS01765 WP 011675413.1	...	387	
NTDB id 269 KZH43 RS08665 WP 001085462.1	IEE	388	
NTDB id 228 SPD RS09265 WP 001085462.1	IEE	388	
NTDB id 194 SPR RS08825 WP 001085462.1	IEE	388	
NTDB id 159 SP RS09750 WP 001085462.1	IEE	388	
NTDB id 499 SM12261 RS08315 WP 078228268.1	IEE	384	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	IEE	384	
NTDB id 453 Spy49 1753c ACI62003.1	D..	378	
NTDB id 408 SMU RS09530 WP 002262392.1	D..	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 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 255641 CU080 RS09505 WP 000963143.1	...	353	
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			

- X non conserved
- X similar
- X ≥ 50% conserved