

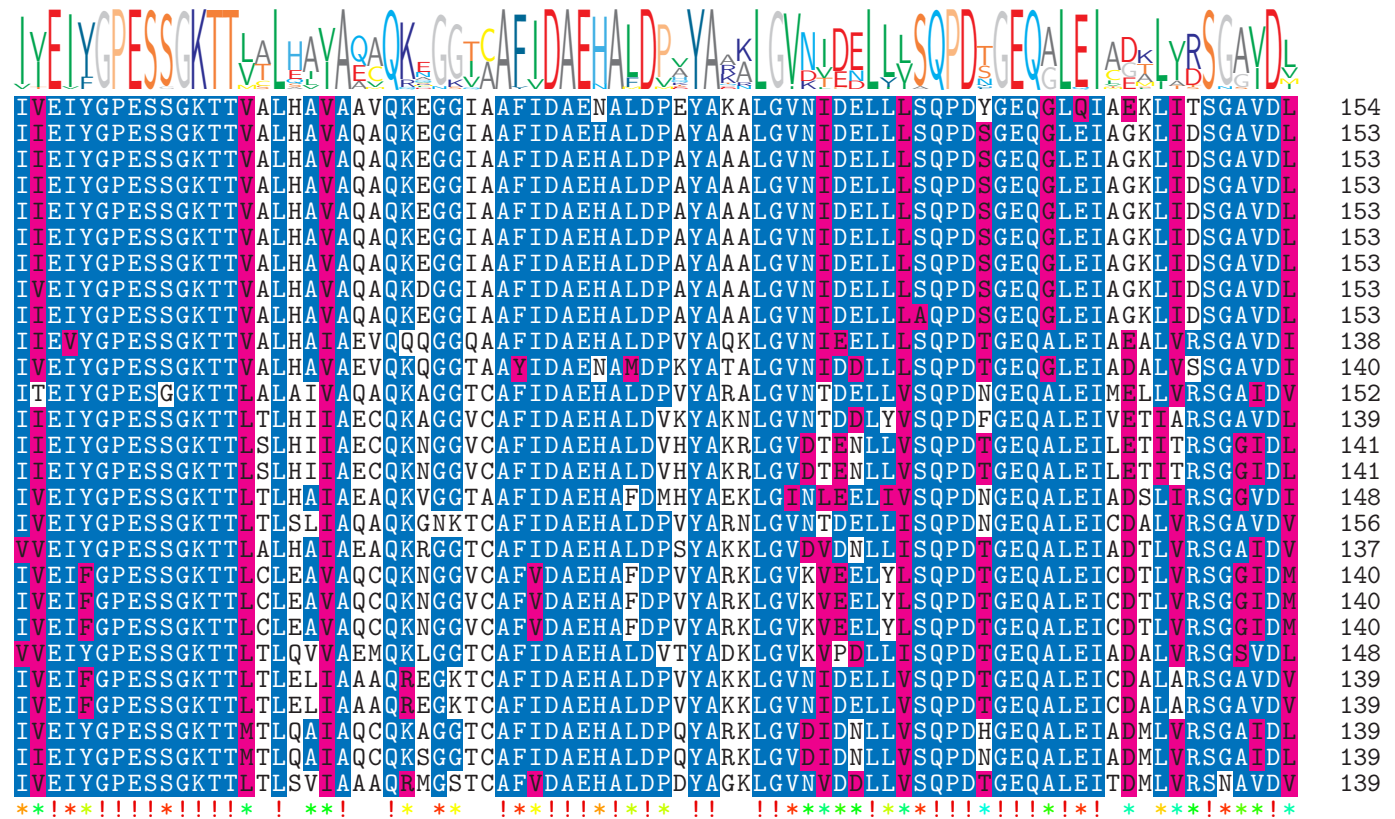
logo

NTDB id 600 KW2 RS01765 WP 011675413.1	MATKK.....KTNFDDITKKYGA	ERDKALADALALIEKD	FGKGSIMRLGEA	.ANQKVS	VSSGSLALD	I	ALGAGGY	PKGR	74	
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAKK.....PKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 228 SPD RS09265 WP 001085462.1	.MAKK.....PKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 194 SPR RS08825 WP 001085462.1	.MAKK.....PKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 159 SP RS09750 WP 001085462.1	.MAKK.....PKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAKK.....PKKLDEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAKK.....PKKLDEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 408 SMU RS09530 WP 002262392.1	.MAKR.....IKKTEEITKKFGD	ERRKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQV	MSSGSLALD	I	ALGAGGY	PKGR	73	
NTDB id 453 Spy49 1753c ACI62003.1	.MAKK.....LKKNEEITKKFGD	ERRKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQV	MSSGSLALD	I	ALGAGGY	PKGR	73	
NTDB id 115 BSU 16940 NP 389576.2	MSDRQAALDMALKQIEKQ	FGKGSIMKLGEK	.TDTRIST	VPSSGSLALD	T	ALGIGGY	PRGR	58		
NTDB id 625 LCA RS02525 WP 011374196.1	MAKDERQAALDAALKKIEKN	FGKGSIMRMGEK	.VDTQVST	VSSGSLALDE	A	LGVG	GYPRGR	60		
NTDB id 1313 DR RS12030 WP 010888966.1	MSKDATKEISAPTD	AKERSKATETAM	QIEKAFGKGSIMKLGAE	.SKLDVQV	VSTGSLSLDL	A	LGVG	GIPRGR	72	
NTDB id 1245 Cj1673c YP 002345041.1	MDDNKRKSLDAALKSLDKT	FGKGTILRLGDK	.EVEQIDS	IGTGSVGLDL	A	LGIG	GVPRGR	59		
NTDB id 1211 C694 RS00795 WP 000963128.1	MAIDEDKQKALISLAIKQID	KVFGKGALVRLGDK	.QVEKIDS	ISTGSLGLDL	A	LGIG	GVPRGR	61		
NTDB id 1214 NCTC11637 00359 SQJ03206.1	MAIDEDKQKALISLAIKQID	KVFGKGALVRLGDK	.QVEKIDA	ISTGSLGLDL	A	LGIG	GVPRGR	61		
NTDB id 1334 RAOC RS04870 WP 004918236.1	MAKT..ETTSPND	DKKKALAAVLEKLDKT	YGKGTVMKLG	DGTVDHNI	IEVIPS	GSLGLDL	A	LGVG	GYPRGR	68
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKKSSKNNTV..VKQVEPE	QKKQALEAALAQIEKQ	FGKGSIMKLGQT	.EQLDIES	VSTGSLGLDL	A	LGIG	GGLPMGR	76	
NTDB id 44830 APA07 RS00215 WP 220400579.1	MDKAKALEGALGQIERA	FGKGSVMRLGQR	.PKVEADV	IPTGSLGLD	I	ALGIG	GLPRGR	57		
NTDB id 1130 NGFG RS03960 WP 003688695.1	MSDDKSKALAAALAQIEKS	FGKGAIMKMDGSQ	QEENLE	ISTGSLGLDL	A	LGVG	GGLPRGR	60		
NTDB id 1124 NGFG RS03960 WP 003688695.1	MSDDKSKALAAALAQIEKS	FGKGAIMKMDGSQ	QEENLE	ISTGSLGLDL	A	LGVG	GGLPRGR	60		
NTDB id 1123 OK783 RS03845 WP 003688695.1	MSDDKSKALAAALAQIEKS	FGKGAIMKMDGSQ	QEENLE	ISTGSLGLDL	A	LGVG	GGLPRGR	60		
NTDB id 1427 RS RS02760 WP 011000510.1	.MEDG.....K..KAASMSA	EKQKALAAALAQIEKQ	FGKGSIMKMGDA	.EVEPVQV	VSTGSLGLD	V	ALGV	GGLPRGR	68	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	MDENKQKALAAALGQIEKQ	FGKGSIMRLGDN	.RAMDVET	ISTGSLSLD	I	ALGAG	GGLPMGR	59		
NTDB id 1142 GTF74 RS11550 WP 000344154.1	MDENKQKALAAALGQIEKQ	FGKGSIMRLGDN	.RAMDVET	ISTGSLSLD	I	ALGAG	GGLPMGR	59		
NTDB id 1022 ACIAD RS06390 WP 004925639.1	MDDNKS	KALQAALSQIEKQ	FGKNTVMRLGDN	.TVQAVEA	VSTGSLTLD	I	ALGI	GGLPKGR	59	
NTDB id 1074 ABD1 RS10195 WP 000344167.1	MDENKS	KALQAALSQIEKQ	FGKNTVMRLGDN	.TVQAVEA	VSTGSLTLD	I	ALGI	GGLPKGR	59	
NTDB id 1205 PSJM300 05545 AFN77183.1	MDENKK	RALAAALGQIEKQ	FGKGAVMRMGDH	.DRQAIPS	ISTGSLGLD	I	ALGI	GGLPKGR	59	
consensus		*** **	*****	*****	*****	*	*****	*****		

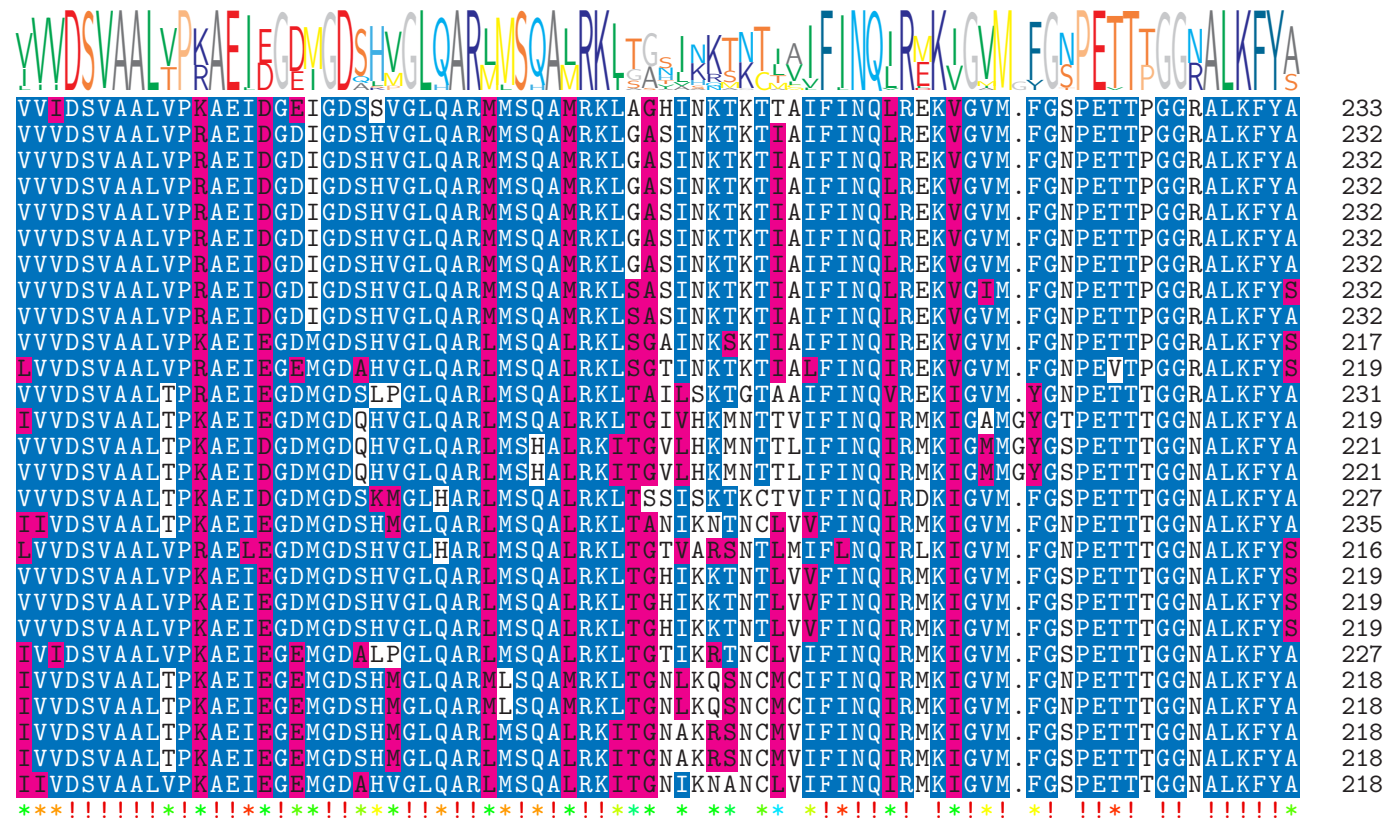
```

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 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
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 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 44830 APA07 RS00215 WP 220400579.1
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

```



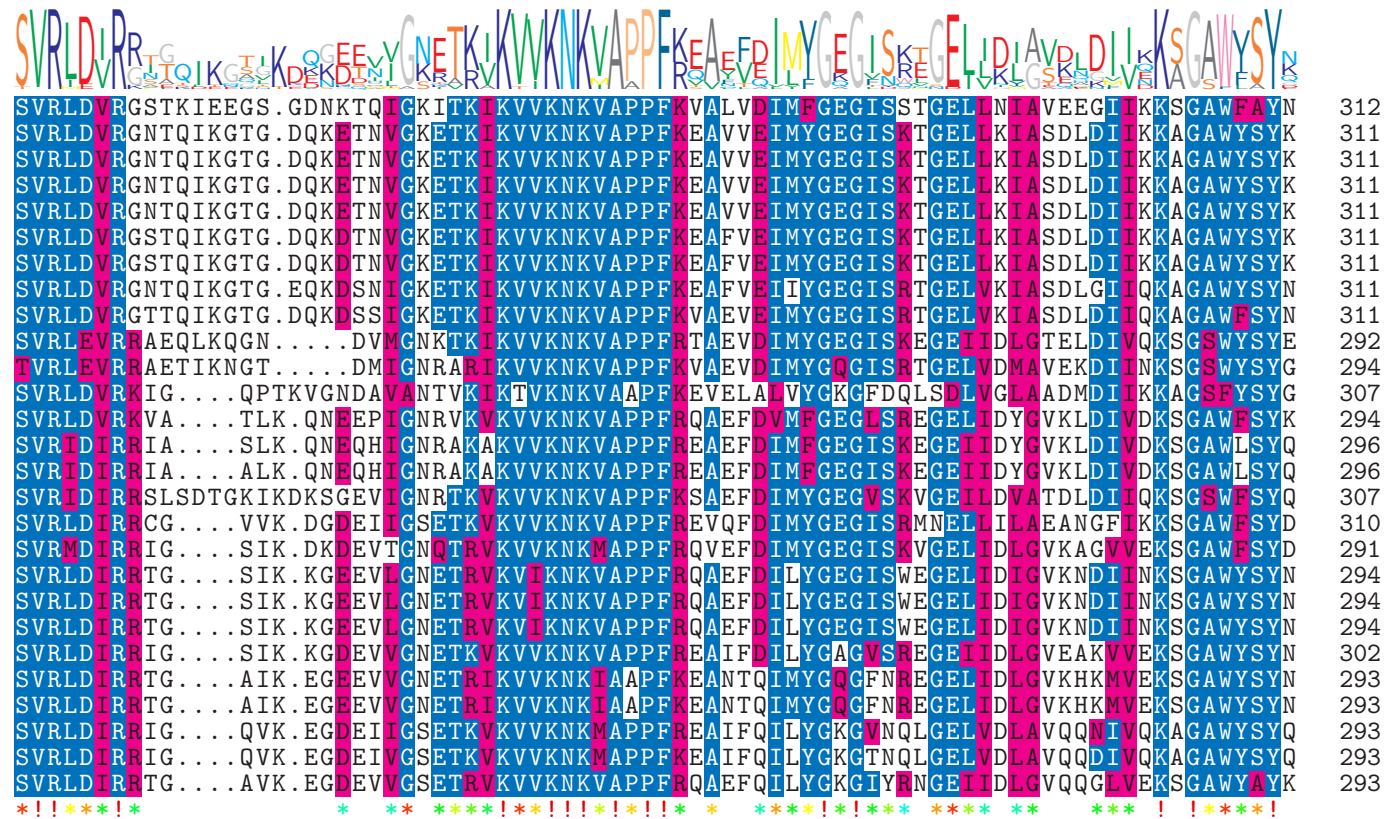
NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
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 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 44830 APA07 RS00215 WP 220400579.1
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 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
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 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 44830 APA07 RS00215 WP 220400579.1
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
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 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
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 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 44830 APA07 RS00215 WP 220400579.1
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

		ELEE	
NTDB id 600 KW2 RS01765 WP 011675413.1	....		387
NTDB id 269 KZH43 RS08665 WP 001085462.1	EIEE		388
NTDB id 228 SPD RS09265 WP 001085462.1	EIEE		388
NTDB id 194 SPR RS08825 WP 001085462.1	EIEE		388
NTDB id 159 SP RS09750 WP 001085462.1	EIEE		388
NTDB id 527 SMSK321 RS11065 WP 001085454.1	EIEE		384
NTDB id 499 SM12261 RS08315 WP 078228268.1	EIEE		384
NTDB id 408 SMU RS09530 WP 002262392.1	ED..		383
NTDB id 453 Spy49 1753c ACI62003.1	ED..		378
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 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 44830 APA07 RS00215 WP 220400579.1	....		341
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