

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 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 378136 FR808 RS17610 WP 015571667.1
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

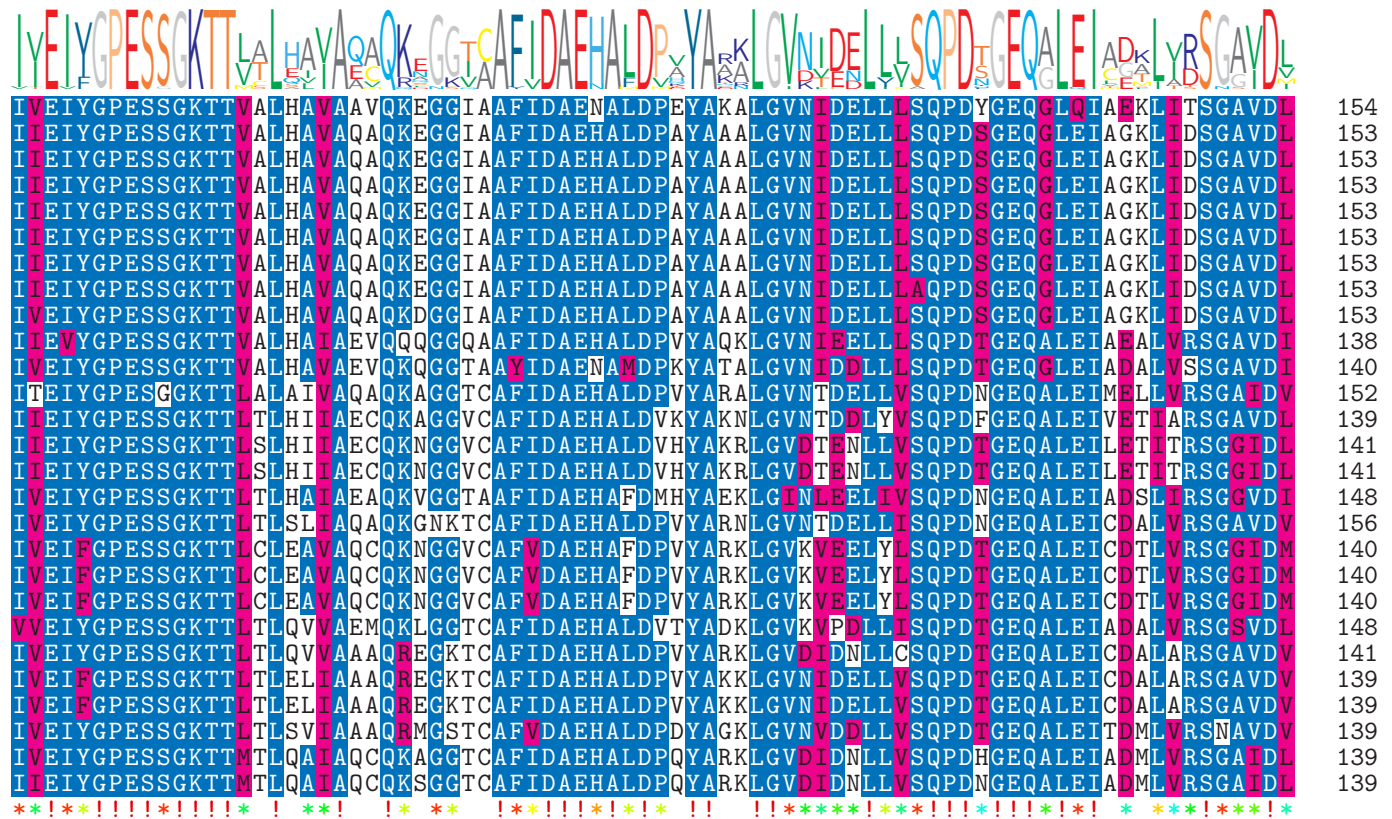


74
73
73
73
73
73
73
73
73
58
60
72
59
61
61
68
76
60
60
60
68
61
59
59
59
59
59

```

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 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 378136 FR808 RS17610 WP 015571667.1
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

```

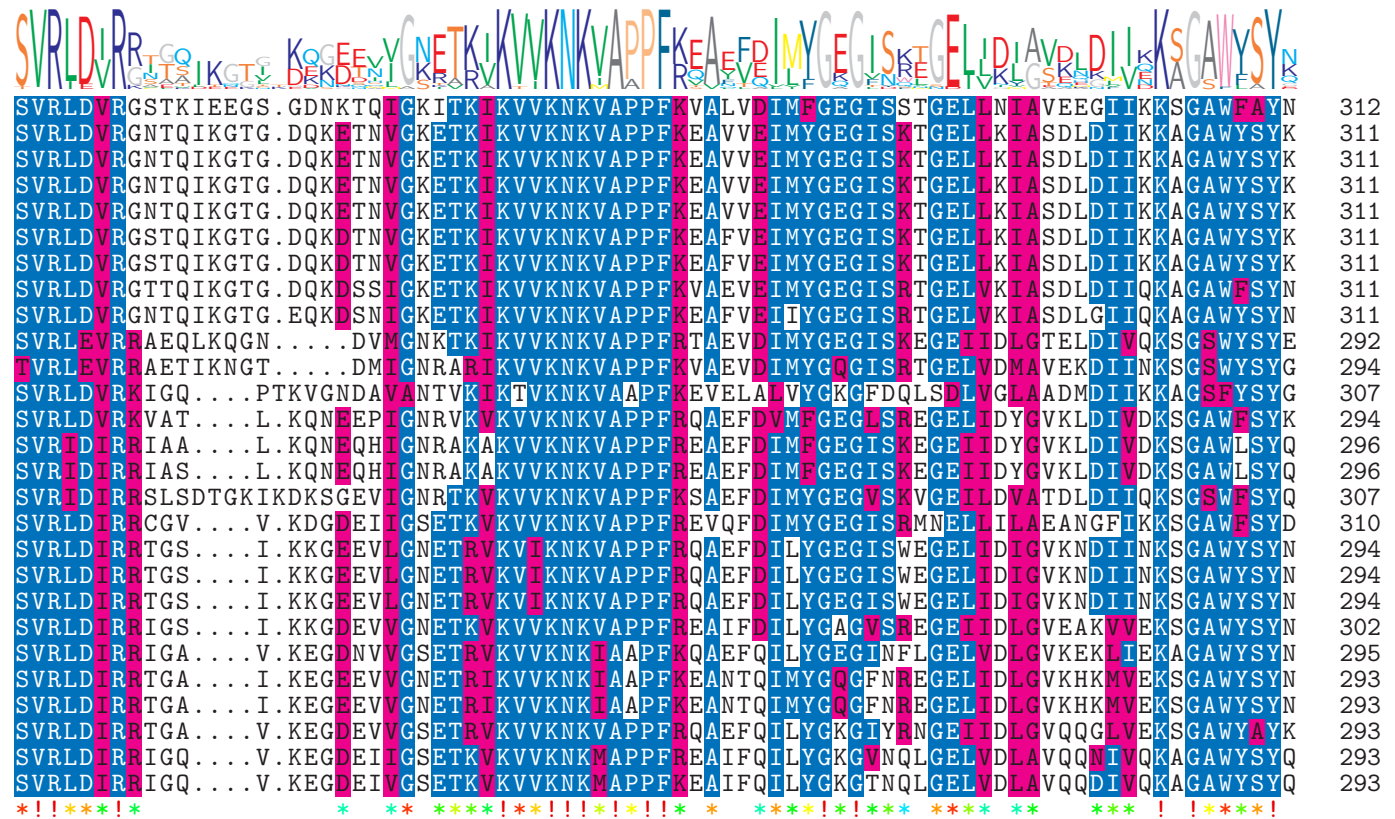


NTDB	id	600	KW2	RS01765	WP	011675413.1	VV	IDSVAAL	VP	KA	EID	GE	IGDSS	VGLQAR	MS	QAMR	KL	GA	CH	INKT	KT	TA	IFIN	QLRE	KV	GV	M	FG	SP	ETT	P	GG	RAL	KFY	A	233					
NTDB	id	269	KZH43	RS08665	WP	001085462.1	VV	DSVAAL	VP	RA	EID	GD	IGDSH	VGLQAR	MS	QAMR	KL	GA	SI	INKT	KT	TA	IFIN	QLRE	KV	GV	M	FG	NP	ETT	P	GG	RAL	KFY	A	232					
NTDB	id	228	SPD	RS09265	WP	001085462.1	VV	DSVAAL	VP	RA	EID	GD	IGDSH	VGLQAR	MS	QAMR	KL	GA	SI	INKT	KT	TA	IFIN	QLRE	KV	GV	M	FG	NP	ETT	P	GG	RAL	KFY	A	232					
NTDB	id	194	SPR	RS08825	WP	001085462.1	VV	DSVAAL	VP	RA	EID	GD	IGDSH	VGLQAR	MS	QAMR	KL	GA	SI	INKT	KT	TA	IFIN	QLRE	KV	GV	M	FG	NP	ETT	P	GG	RAL	KFY	A	232					
NTDB	id	159	SP	RS09750	WP	001085462.1	VV	DSVAAL	VP	RA	EID	GD	IGDSH	VGLQAR	MS	QAMR	KL	GA	SI	INKT	KT	TA	IFIN	QLRE	KV	GV	M	FG	NP	ETT	P	GG	RAL	KFY	A	232					
NTDB	id	527	SMSK321	RS11065	WP	001085454.1	VV	DSVAAL	VP	RA	EID	GD	IGDSH	VGLQAR	MS	QAMR	KL	GA	SI	INKT	KT	TA	IFIN	QLRE	KV	GV	M	FG	NP	ETT	P	GG	RAL	KFY	A	232					
NTDB	id	499	SM12261	RS08315	WP	078228268.1	VV	DSVAAL	VP	RA	EID	GD	IGDSH	VGLQAR	MS	QAMR	KL	GA	SI	INKT	KT	TA	IFIN	QLRE	KV	GV	M	FG	NP	ETT	P	GG	RAL	KFY	A	232					
NTDB	id	453	Spy49	1753c	ACI	62003.1	VV	DSVAAL	VP	RA	EID	GD	IGDSH	VGLQAR	MS	QAMR	KL	SA	SI	INKT	KT	TA	IFIN	QLRE	KV	GV	M	FG	NP	ETT	P	GG	RAL	KFY	A	232					
NTDB	id	408	SMU	RS09530	WP	002262392.1	VV	DSVAAL	VP	RA	EID	GD	IGDSH	VGLQAR	MS	QAMR	KL	SA	SI	INKT	KT	TA	IFIN	QLRE	KV	GV	M	FG	NP	ETT	P	GG	RAL	KFY	S	232					
NTDB	id	115	BSU	16940	NP	389576.2	VV	DSVAAL	VP	KA	EIE	GD	MGDSH	VGLQAR	LS	QALR	KL	SG	AI	NK	SK	TI	AI	FINQ	IREK	VG	VM	FG	NP	ETT	P	GG	RAL	KFY	S	217					
NTDB	id	625	LCA	RS02525	WP	0011374196.1	L	V	DSVAAL	VP	RA	EIE	GE	MGD	A	HVGL	QAR	LS	QALR	KL	SG	TI	INKT	KT	IA	IFINQ	IREK	VG	VM	FG	NP	EV	TP	GG	RAL	KFY	S	219			
NTDB	id	1313	DR	RS12030	WP	010888966.1	VV	DSVAAL	TP	RA	EIE	GE	MDG	S	L	PGL	QAR	LS	QALR	KL	TA	IL	SK	TG	TAA	IFINQ	VREK	IG	VM	YG	NP	PETT	T	GG	RAL	KFY	A	231			
NTDB	id	1245	Cj1673c	YP	002345041.1	L	V	DSVAAL	TP	KA	EIE	GE	MDG	Q	HVGL	QAR	LS	QALR	KL	TG	IV	HKM	N	TT	V	IFINQ	IRMK	IG	AM	G	Y	GT	PETT	T	GG	NAL	KFY	A	219		
NTDB	id	1214	NCTC11637	00359	SQJ	03206.1	VV	DSVAAL	TP	KA	EID	GE	MDG	Q	HVGL	QAR	LS	SH	ALR	K	IT	GV	L	HKM	N	TT	L	IFINQ	IRMK	IG	MM	G	Y	GT	PETT	T	GG	NAL	KFY	A	221
NTDB	id	1211	C694	RS00795	WP	000963128.1	VV	DSVAAL	TP	KA	EID	GE	MDG	Q	HVGL	QAR	LS	SH	ALR	K	IT	GV	L	HKM	N	TT	L	IFINQ	IRMK	IG	MM	G	Y	GT	PETT	T	GG	NAL	KFY	A	221
NTDB	id	1334	RAOC	RS04870	WP	004918236.1	VV	DSVAAL	TP	KA	EID	GE	MDG	S	KM	G	LHAR	LS	QALR	KL</																					

```

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 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 378136 FR808 RS17610 WP 015571667.1
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 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
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 0011374196.1
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 378136 FR808 RS17610 WP 015571667.1
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
DEKIGQGA ⁺ AKAK ⁺ NYLKEHQ ⁺ DV ⁺ FDEIDHKVRAAHG ⁺ LDDSEVAETEEETTAS ⁺ KTAKAKKE ⁺ EKAVETEEIELE ⁺ ED	387
DEKIGQGS ⁺ ENAKKYLAEHP ⁺ EIFDEIDKQVRSKF ⁺ GLIDGEEVSEQDTENKKDE . . . PKKEEA . VNEEVPLDLGDELEIE	385
DEKIGQGS ⁺ ENAKKYLAEHP ⁺ EIFDEIDKQVRSKF ⁺ GLIDGEEVSEQDTENKKDE . . . PKKEEA . VNEEVPLDLGDELEIE	385
DEKIGQGS ⁺ ENAKKYLAEHP ⁺ EIFDEIDKQVRSKF ⁺ GLIDGEEVSEQDTENKKDE . . . PKKEEA . VNEEVPLDLGDELEIE	385
DEKIGQGS ⁺ ENAKKYLADNP ⁺ EVFAEIDHQVVRVQF ⁺ GLIDGEEAAE . . . SKKDE . . . VAQVDS . VNEEVTLDLGDLEIE	381
DEKIGQGS ⁺ ENAKKYLADNP ⁺ EIFDEIDHQVVRVQF ⁺ GLIDGEEIAE . . . SKKDE . . . AAQVDS . VNEEVTLDLGDLEIE	381
GEKIGQGS ⁺ ENAKRYLADHP ⁺ QLFDEIDRKVRVKF ⁺ GLLEESEESAMAVASE E TDDLALDLNGIEIE	377
GEKIGQGS ⁺ ENAKKFLADNP ⁺ EIFDDIDHKVVRVQY ⁺ GLIEEDNTEEKQSSKEK ETDEK . ADKNLVLELDDTIELE	382
EE ⁺ RLGQGR ⁺ ENAKQFLKEN ⁺ KDIMLMIQEQ ⁺ IREHYGLDNGGVVQQAEETQEEL . EFE . E	348
SERIGQGR ⁺ ENAKNYLADH ⁺ EDVEDEVRLKVR ⁺ AAAYGISDVPEEDLPTTEDE . QI . NILPDDST EE	355
DERIGQG ⁺ KEKTIA ⁺ YIAERPEMEQEIRDRVMAAIRAGNAGEAPALAPAPAAPEAA . . . EA	363
DKKLGGGREN ⁺ SKAFILKEN ⁺ PEIAD ⁺ EITKAIQNSM ⁺ GIEGMI SGSEDD ⁺ E GEE	343
DKKLGGGREN ⁺ AKALLKED ⁺ KALADEITLKIKESIG ⁺ SNEEI MPLPDEP LEEME	347
DKKLGGGREN ⁺ AKALLKED ⁺ KALADEITLKIKESIG ⁺ SNEEI MPLPDEP LEEME	347
DTKLGGGRD ⁺ TVKEL ⁺ IKDNPELAE ⁺ ELEAKIREKLQAK	343
GTKIGQG ⁺ KNNNAV ⁺ KLKEN ⁺ PEIAD ⁺ KLQEIRNTL ⁺ ASNPN VLKATASDSN . . . DESDVEEFSEEL	372
GAKIGGQKDN ⁺ VRVWLKEN ⁺ PEISDEIDAKIRALNG ⁺ VEMHI TEG T . . . QDET ⁺ DGERPEE	348
GAKIGGQKDN ⁺ VRVWLKEN ⁺ PEISDEIDAKIRALNG ⁺ VEMHI TEG T . . . QDET ⁺ DGERPEE	348
GAKIGGQKDN ⁺ VRVWLKEN ⁺ PEISDEIDAKIRALNG ⁺ VEMHI TEG T . . . QDET ⁺ DGERPEE	348
GERIGQGRD ⁺ NCREFLRENAELAREIENK ⁺ VREHLGVTPMG AVTL . AEEVE . . . ED	352
GDKIGQG ⁺ KANAISWLKEN ⁺ PAAAEIEKKVRELLLNQDS KPDFVVD GADAEETNEDF	352
GDKIGGQKANACKYLKEN ⁺ PEIAKTLDKKLREMLLNPNEM QLIAETSSAA . . . DDVEFGAVPEEF	354
GDKIGGQKANACKYLKEN ⁺ PEIAKTLDKKLREMLLNPNEM QLIAETSSAA . . . DDVEFGAVPEEF	354
GSKIGGQKANAACKYLEN ⁺ PEIGQIEEQ ⁺ IRAKLLVTSAN TKATPVAEDL . . . ADADI	347
GNKIGQGKNNVIRY ⁺ LEENPQISTEIEAVIREQLLTKASD QTAA . HDETE . . . EEPDLLES	349
GNKIGQGKNNVIRY ⁺ FENNQIAEIEIRNIREQLLTGTN GAVQ . I . EDE . . . EEPDLLES	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 527 SMSK321 RS11065 WP 001085454.1	IEE		384
NTDB id 499 SM12261 RS08315 WP 078228268.1	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 378136 FR808 RS17610 WP 015571667.1	...		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			

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