

logo

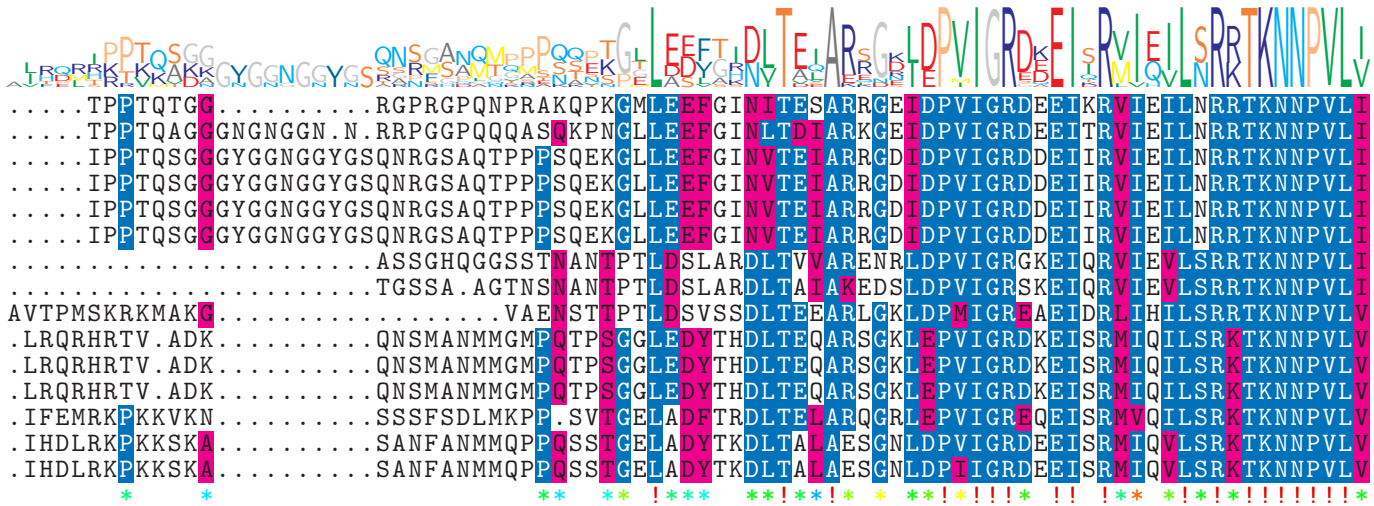
NTDB id 601 KW2 RS02615 WP 021036805.1	MLCQNCNINEA.....TI	13
NTDB id 378 SMU RS02690 WP 002263569.1	MLCQNCNINEA.....TI	13
NTDB id 241 SP RS04015 WP 000882523.1	MLCQNCNINDS.....TI	13
NTDB id 281 KZH43 RS03550 WP 000882517.1	MLCQNCNINDS.....TI	13
NTDB id 245 SPD RS03860 WP 000882517.1	MLCQNCNINDS.....TI	13
NTDB id 243 SPR RS03635 WP 000882517.1	MLCQNCNINDS.....TI	13
NTDB id 111528 A16R RS00475 WP 000971179.1	..MMFGRFTERAQKVLALSQEEAIRIGHNNIGTEHILLGLVREGEGLAAKALIALGLSPEKVQKEVEALIG.....RGTEAS	75
NTDB id 85 BSU 00860 NP 387967.1	..MMFGRFTERAQKVLALAQEEALRLIGHNNIGTEHILLGLVREGEGLAAKALQALGLGSEKIQKEVESLIG.....RGQEMS	75
NTDB id 610 V4T04 RS10165 WP 012897346.1	MKFENIKYPTPLDRILEKAEYEAHQYQYGTIESAHLAAMATTSGSTAYSLLAGMNVDDSSDLLIDL.....EDLSSHVKVKR	77
NTDB id 290 KZH43 RS10025 WP 001109677.1	MNYSKALNECIESAYMVA GHFGARYLESWHLLIAMSNHSYSVAGATLNDYPYEMDRLE....EVALELTETDYSQDET	75
NTDB id 289 SPD RS10700 WP 001109677.1	MNYSKALNECIESAYMVA GHFGARYLESWHLLIAMSNHSYSVAGATLNDYPYEMDRLE....EVALELTETDYSQDET	75
NTDB id 287 SP RS11210 WP 001109712.1	MNYSKALNECIESAYMVA GHFGARYLESWHLLIAMSNHSYSVAGATLNDYPYEMDRLE....EVALELTETDYSQDET	75
NTDB id 377 SMU RS09275 WP 002262344.1	...MTDYS LKMQEVFRLAQFEAARFESSYLESWHVLLAMVEIDSSVAGLSFAEFEADVRFEDYQAAAILAIGKKPKSSSN...DI	79
NTDB id 329 STER RS00545 WP 011680614.1	...MTIYSRKMQAIFHRAQLEAERFESPFL ETWHVLLAMVEVTGSAVYLTFTDFEDRIHSEEIETA AVLAMEKRPKDLSESDI	81
NTDB id 327 STU RS10020 WP 011225298.1	...MTIYSRKMQAIFHRAQLEAERFESPFL ETWHVLLAMVEVPGSAVYLTFTDFEDRIHSEEIETA AVLAMEKRPKDLSESDI	81
consensus	*** * * * * *	

logo

NTDB	id	601	KW2	RS02615	WP	021036805.1	HL	YTSVNG	QKKQ	ID	LCQNCYQI	...	MKS	G	Q	EAL	L	F	G	A	G	N	A	S	N	G	N	S	D	E		P	F	N	P	.	F	N	D	I	F	S	A	L	G	Q	.	D	F	N	G	A	A	S	N	Q		81																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
NTDB	id	378	SMU	RS02690	WP	002263569.1	HL	YANVNG	QKKQ	ID	LCQNCYQI	...	M	K	T	D	P	E	N	G	P	L	N	H	I	S	Q	N	S	S		I	N	P	F	F	D	.	D	F	F	G	D	.	L	N	N	F	R	A	F	N	N	Q	D	L	P	N		80																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
NTDB	id	241	SP	RS04015	WP	000882523.1	HL	YTNLNG	KKKQ	ID	LCQNCYKI	...	I	K	T	D	P	N	N	S	L	F	K	G	M	T	D	L	N	N	R	D		F	D	P	.	F	G	D	F	F	N	D	.	L	N	N	F	R	P	S	S	N	..	T	P	P		77																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
NTDB	id	281	KZH43	RS03550	WP	000882517.1	HL	YTNLNG	KKKQ	ID	LCQNCYKI	...	I	K	T	D	P	N	N	S	L	F	K	G	M	T	D	L	N	N	R	D		F	D	P	.	F	G	D	F	F	N	D	.	L	N	N	F	R	P	S	S	N	..	T	P	P		77																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
NTDB	id	245	SPD	RS03860	WP	000882517.1	HL	YTNLNG	KKKQ	ID	LCQNCYKI	...	I	K	T	D	P	N	N	S	L	F	K	G	M	T	D	L	N	N	R	D		F	D	P	.	F	G	D	F	F	N	D	.	L	N	N	F	R	P	S	S	N	..	T	P	P		77																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
NTDB	id	243	SPR	RS03635	WP	000882517.1	HL	YTNLNG	KKKQ	ID	LCQNCYKI	...	I	K	T	D	P	N	N	S	L	F	K	G	M	T	D	L	N	N	R	D		F	D	P	.	F	G	D	F	F	N	D	.	L	N	N	F	R	P	S	S	N	..	T	P	P		77																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
NTDB	id	111528	A16R	RS00475	WP	000971179.1	Q	T	V	H	Y	T	P	R	A	K	K	V	I	E	L	S	M	D	E	A	R	K	L	G	H	S	Y	V	G	T	E	H	I	L	L	G	L	I	R	E	G	E	G	V	A	A	R	V	.	L	N	N	L	G	V	S	L	N	K	A	R	Q	Q	V	L	Q	..	L	L	G	S	N	E			146																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
NTDB	id	85	BSU	00860	NP	387967.1	Q	T	I	H	Y	T	P	R	A	K	K	V	I	E	L	S	M	D	E	A	R	K	L	G	H	S	Y	V	G	T	E	H	I	L	L	G	L	I	R	E	G	E	G	V	A	A	R	V	.	L	N	N	L	G	V	S	L	N	K	A	R	Q	Q	V	L	Q	..	L	L	G	S	N	E			146																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
NTDB	id	610	V4T04	RS10165	WP	012897346.1	S	T	L	R	F	S	P	R	A	E	E	V	M	T	A	A	S	F	L	A	I	H	N	N	S	E	A	V	G	T	E	H	L	Y	A	L	L	Q	V	E	D	.	G	F	G	L	Q	L	L	K	L		Q	K	I	N	I	V	S	.	L	R	K	E	L	E	K	R	T	G	L	K	V	P	E	S	K		153																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
NTDB	id	290	KZH43	RS10025	WP	001109677.1	T	E	L	P	F	S	R	R	L	Q	I	L	F	D	E	A	E	Y	V	A	S	.	V	H	A	K	V	L	G	T	E	H	V	L	Y	A	I	L	H	D	.	S	N	A	L	A	T	R	I	L	E	R	A	G	F	S	Y	E	D	K	K	D	Q	V	K	I	A	A	L	.	R	R	N	.	L	E	E	R	A	G	W	T	R	E	D	L	K	A		160																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
NTDB	id	289	SPD	RS10700	WP	001109677.1	T	E	L	P	F	S	R	R	L	Q	I	L	F	D	E	A	E	Y	V	A	S	.	V	H	A	K	V	L	G	T	E	H	V	L	Y	A	I	L	H	D	.	S	N	A	L	A	T	R	I	L	E	R	A	G	F	S	Y	E	D	K	K	D	Q	V	K	I	A	A	L	.	R	R	N	.	L	E	E	R	A	G	W	T	R	E	D	L	K	A		160																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
NTDB	id	287	SP	RS11210	WP	001109712.1	T	E	L	P	F	S	R	R	L	Q	V	L	F	D	E	A	E	Y	V	A	S	.	V	H	A	K	V	L	G	T	E	H	V	L	Y	A	I	L	H	D	.	S	N	A	L	A	T	R	I	L	E	R	A	G	F	S	Y	E	D	K	K	D	Q	V	K	I	A	A	L	.	R	R	N	.	L	E	E	R	A	G	W	T	R	E	D	L	K	A		160																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
NTDB	id	377	SMU	RS09275	WP	002262344.1	M	L	L	E	Q	S	H	A	L	K	R	T	L	A	E	A	A	A	I	S	Q	V	T	H	A	K	E	V	G	T	E	H	V	L	F	A	M	L	L	N	P	M	L	A	T	R	I	L	E	L	V	G	F	H	A	K	D	D	G	E	S	I	R	L	D	L	R	K	V	T	E	R	Y	A	G	F	S	K	E	D	I	K	A		164																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
NTDB	id	329	STER	RS00545	WP	011680614.1	D	L	R	A	Q	S	P	A	L	E	A	M	L	Q	E	A	Q	E	I	A	S	V	T	G	A	V	E	G	S	E	H	V	L	M	A	F	L	L	H	K	D	L	M	V	C	R	L	E	V	A	G	F	Q	Y	K	D	S	D	K	P	R	I	I	D	L	R	R	S	.	L	E	R	N	A	G	L	S	K	Q	D	L	K	A		166																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
NTDB	id	297	STU	RS10020	WP	011225298.1	D	L	R	A	Q	S	P	A	L	E	A	M	L	Q	E	A	Q	E	I	A	S	V	T	G	A	V	E	G	S	E	H	V	L	M	A	F	L	L	H	K	D	L	M	V	C	R	L	E	V	A	G	F	Q	Y	K	D	S	D	K	P	R	I	I	D	L	R	R	S	.	L	E	R	N	A	G	L	S	K	Q	D	L	K	A		166																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
consensus							*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

logo

NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
NTDB id 243 SPR RS03635 WP 000882517.1
NTDB id 111528 A16R RS00475 WP 000971179.1
NTDB id 85 BSU 00860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
NTDB id 287 SP RS11210 WP 001109712.1
NTDB id 377 SMU RS09275 WP 002262344.1
NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus



151
158
157
157
157
157
208
207
220
233
233
233
237
240
240

logo

NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
NTDB id 243 SPR RS03635 WP 000882517.1
NTDB id 111528 A16R RS00475 WP 000971179.1
NTDB id 85 BSU 00860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
NTDB id 287 SP RS11210 WP 001109712.1
NTDB id 377 SMU RS09275 WP 002262344.1
NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus

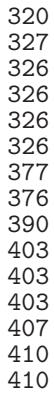


236
243
242
242
242
242
292
291
305
318
318
318
322
325
325

```

NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
NTDB id 243 SPR RS03635 WP 000882517.1
NTDB id 111528 A16R RS00475 WP 000971179.1
NTDB id 85 BSU 00860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
NTDB id 287 SP RS11210 WP 001109712.1
NTDB id 377 SMU RS09275 WP 002262344.1
NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus

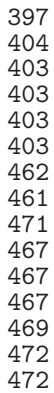
```



```

NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
NTDB id 243 SPR RS03635 WP 000882517.1
NTDB id 111528 A16R RS00475 WP 000971179.1
NTDB id 85 BSU 00860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
NTDB id 287 SP RS11210 WP 001109712.1
NTDB id 377 SMU RS09275 WP 002262344.1
NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus

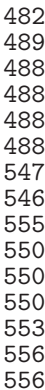
```



```

NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
NTDB id 243 SPR RS03635 WP 000882517.1
NTDB id 111528 A16R RS00475 WP 000971179.1
NTDB id 85 BSU 00860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
NTDB id 287 SP RS11210 WP 001109712.1
NTDB id 377 SMU RS09275 WP 002262344.1
NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus

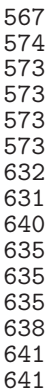
```



```

NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
NTDB id 243 SPR RS03635 WP 000882517.1
NTDB id 111528 A16R RS00475 WP 000971179.1
NTDB id 85 BSU O0860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
NTDB id 287 SP RS11210 WP 001109712.1
NTDB id 377 SMU RS09275 WP 002262344.1
NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus

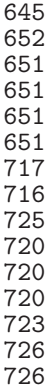
```



```

NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
NTDB id 243 SPR RS03635 WP 000882517.1
NTDB id 111528 A16R RS00475 WP 000971179.1
NTDB id 85 BSU 00860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
NTDB id 287 SP RS11210 WP 001109712.1
NTDB id 377 SMU RS09275 WP 002262344.1
NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus

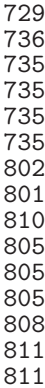
```



```

NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
NTDB id 243 SPR RS03635 WP 000882517.1
NTDB id 111528 A16R RS00475 WP 000971179.1
NTDB id 85 BSU 00860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
NTDB id 287 SP RS11210 WP 001109712.1
NTDB id 377 SMU RS09275 WP 002262344.1
NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus

```



logo

NTDB id 601 KW2 RS02615 WP 021036805.1	ISNQTQETAETTDDEEVPAE	748
NTDB id 378 SMU RS02690 WP 002263569.1	VIKASNK.VETVTKATSD.	753
NTDB id 241 SP RS04015 WP 000882523.1	QIKSAKK.AEVKSSEKEK.	752
NTDB id 281 KZH43 RS03550 WP 000882517.1	QIKSAKK.AEVKSSEKEK.	752
NTDB id 245 SPD RS03860 WP 000882517.1	QIKSAKK.AEVKSSEKEK.	752
NTDB id 243 SPR RS03635 WP 000882517.1	QIKSAKK.AEVKSSEKEK.	752
NTDB id 111528 A16R RS00475 WP 000971179.1	VIHSAEKVK.....	811
NTDB id 85 BSU 00860 NP 387967.1	VVKTTAKTN.....	810
NTDB id 610 V4T04 RS10165 WP 012897346.1	KIAQIV.....	816
NTDB id 290 KZH43 RS10025 WP 001109677.1	KFDIA.....	810
NTDB id 289 SPD RS10700 WP 001109677.1	KFDIA.....	810
NTDB id 287 SP RS11210 WP 001109712.1	KFDIA.....	810
NTDB id 377 SMU RS09275 WP 002262344.1	KFDIV.....	813
NTDB id 297 STER RS00545 WP 011680614.1	TFTVV.....	816
NTDB id 329 STU RS10020 WP 011225298.1	TFTVV.....	816
consensus		



-  non conserved
-  similar
-  ≥ 50% conserved