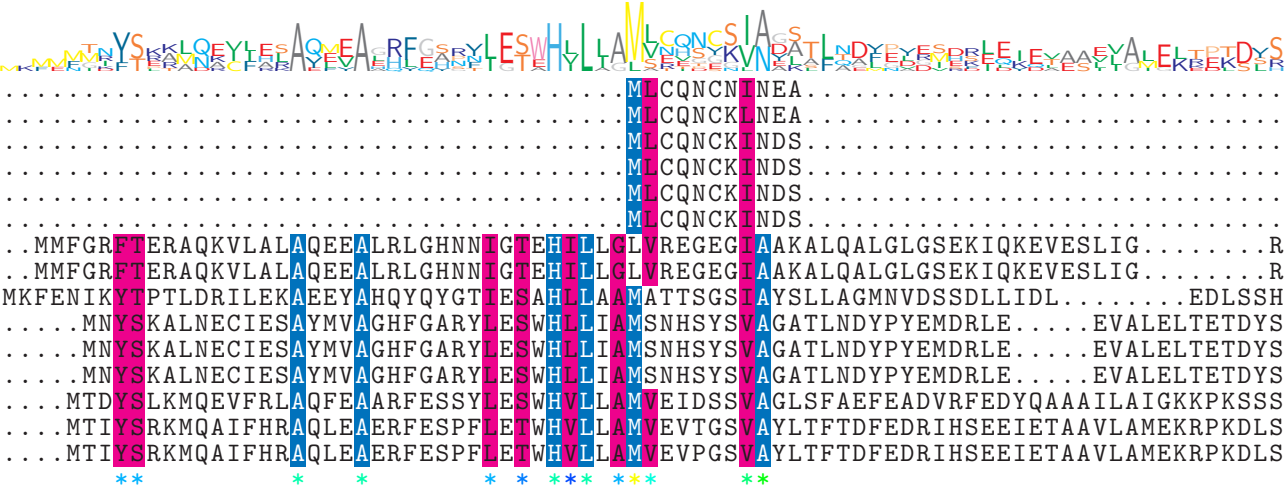


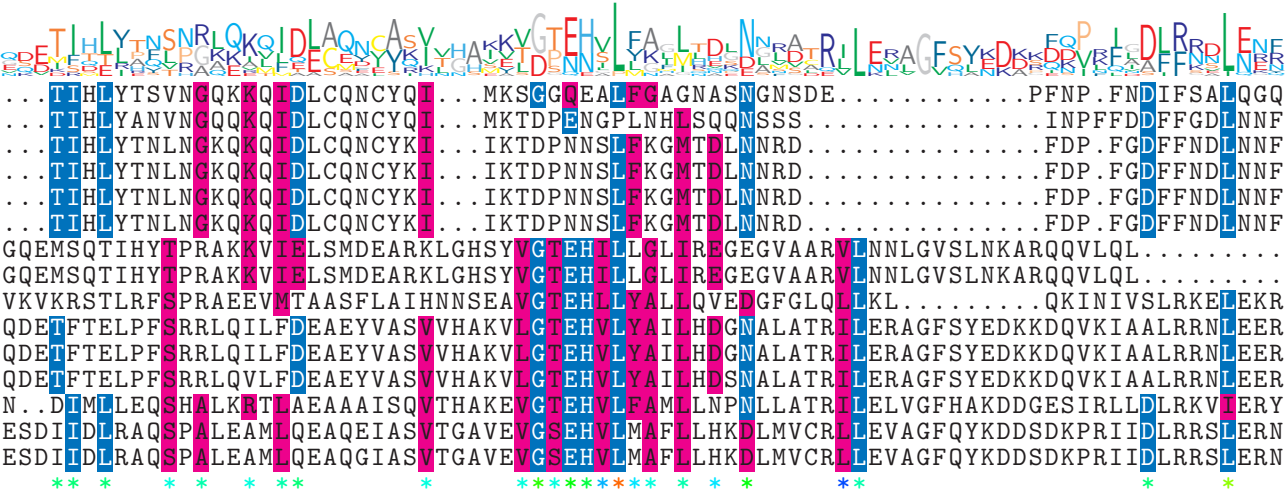
logo

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	53827	BsBEST3145	RS00575	WP	003235011.1
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

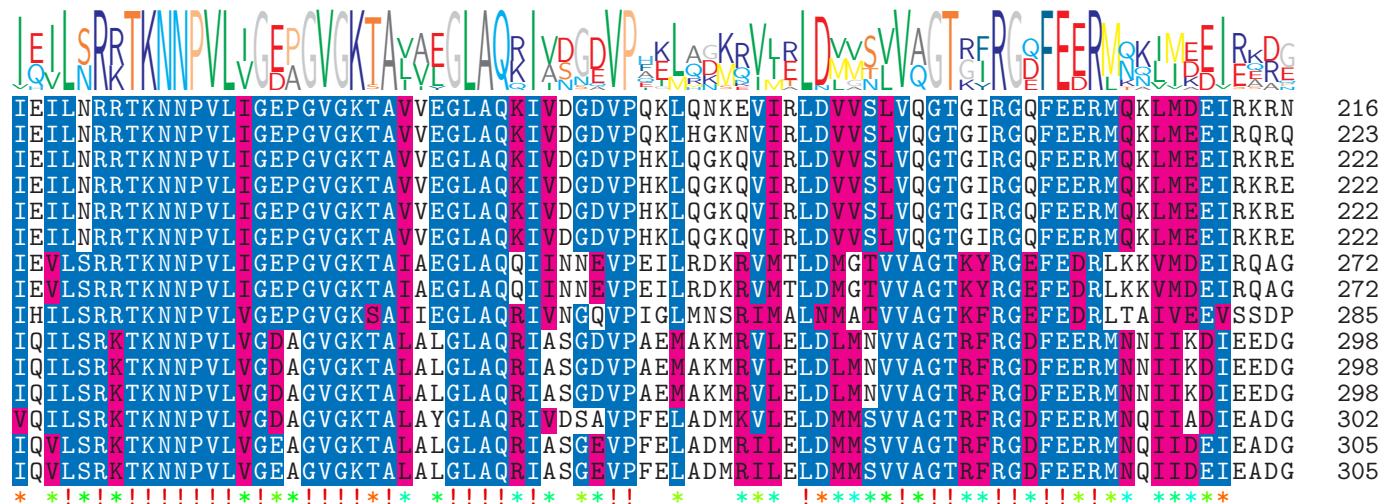
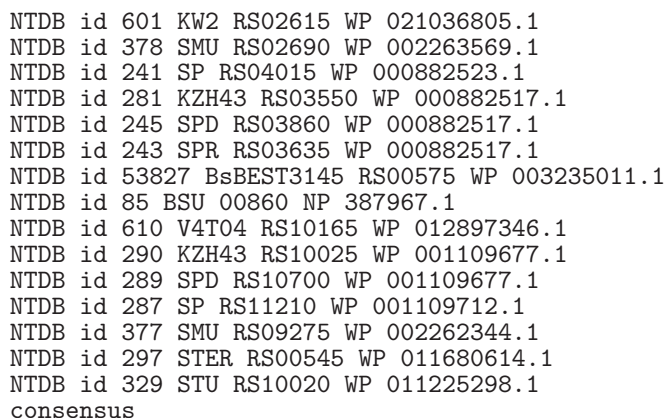
NTDB id	601	KW2	RS02615	WP	021036805.1
NTDB id	378	SMU	RS02690	WP	002263569.1
NTDB id	241	SP	RS04015	WP	000882523.1
NTDB id	281	KZH43	RS03550	WP	000882517.1
NTDB id	245	SPD	RS03860	WP	000882517.1
NTDB id	243	SPR	RS03635	WP	000882517.1
NTDB id	53827	BsBEST3145	RS00575	WP	003235011.1
NTDB id	85	BSU	00860	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 53827 BsBEST3145 RS00575 WP 003235011.1
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	D	V	I	M	F	I	D	E	I	H	E	I	V	G	A	G	S	A	G	D	G	N	M	D	A	G	N	I	L	K	P	A	L	A	R	G	E	L	Q	L	V	G	A	T	T	L	N	E	Y	R	.	I	E	K	D	A	A	L	E	R	R	M	Q	P	V	K	V	D	E	P	S	V	A	E	T	I	T	I	L		295																																																																																																																																																																																																																																																																																																																																																																																																
NTDB	id	378	SMU	RS02690	WP	002263569.1	D	V	I	L	F	I	D	E	I	H	E	I	V	G	A	G	S	A	G	D	G	N	M	D	A	G	N	I	L	K	P	A	L	A	R	G	E	L	Q	L	V	G	A	T	T	L	N	E	Y	R	.	I	E	K	D	A	A	L	E	R	R	M	Q	P	V	K	V	D	E	P	S	V	A	E	T	I	T	I	L		302																																																																																																																																																																																																																																																																																																																																																																																																
NTDB	id	241	SP	RS04015	WP	000882523.1	D	I	I	L	F	I	D	E	I	H	E	I	V	G	A	G	S	A	S	D	G	N	M	D	A	G	N	I	L	K	P	A	L	A	R	G	E	L	Q	L	V	G	A	T	T	L	N	E	Y	R	.	I	E	K	D	A	A	L	E	R	R	M	Q	P	V	K	V	D	E	P	T	V	D	E	T	I	T	I	L		301																																																																																																																																																																																																																																																																																																																																																																																																
NTDB	id	281	KZH43	RS03550	WP	000882517.1	D	I	I	L	F	I	D	E	I	H	E	I	V	G	A	G	S	A	S	D	G	N	M	D	A	G	N	I	L	K	P	A	L	A	R	G	E	L	Q	L	V	G	A	T	T	L	N	E	Y	R	.	I	E	K	D	A	A	L	E	R	R	M	Q	P	V	K	V	D	E	P	T	V	D	E	T	I	T	I	L		301																																																																																																																																																																																																																																																																																																																																																																																																
NTDB	id	245	SPD	RS03860	WP	000882517.1	D	I	I	L	F	I	D	E	I	H	E	I	V	G	A	G	S	A	S	D	G	N	M	D	A	G	N	I	L	K	P	A	L	A	R	G	E	L	Q	L	V	G	A	T	T	L	N	E	Y	R	.	I	E	K	D	A	A	L	E	R	R	M	Q	P	V	K	V	D	E	P	T	V	D	E	T	I	T	I	L		301																																																																																																																																																																																																																																																																																																																																																																																																
NTDB	id	243	SPR	RS03635	WP	000882517.1	D	I	I	L	F	I	D	E	I	H	E	I	V	G	A	G	S	A	S	D	G	N	M	D	A	G	N	I	L	K	P	A	L	A	R	G	E	L	Q	L	V	G	A	T	T	L	N	E	Y	R	.	I	E	K	D	A	A	L	E	R	R	M	Q	P	V	K	V	D	E	P	T	V	D	E	T	I	T	I	L		301																																																																																																																																																																																																																																																																																																																																																																																																
NTDB	id	53827	BsBEST3145	RS00575	WP	003235011.1	N	I	I	L	F	I	D	E	L	H	T	L	I	G	A	G	.	A	E	G	A	I	D	A	S	N	I	L	K	P	S	L	A	R	G	E	L	Q	C	I	G	A	T	T	L	D	E	Y	R	K	Y	.	I	E	K	D	A	A	L	E	R	R	F	Q	P	I	Q	V	D	Q	P	S	V	D	E	S	I	Q	I	L		351																																																																																																																																																																																																																																																																																																																																																																																															
NTDB	id	85	BSU	00860	NP	387967.1	N	I	I	L	F	I	D	E	L	H	T	L	I	G	A	G	.	A	E	G	A	I	D	A	S	N	I	L	K	P	S	L	A	R	G	E	L	Q	C	I	G	A	T	T	L	D	E	Y	R	K	Y	.	I	E	K	D	A	A	L	E	R	R	F	Q	P	I	Q	V	D	Q	P	S	V	D	E	S	I	Q	I	L		351																																																																																																																																																																																																																																																																																																																																																																																															
NTDB	id	610	V4T04	RS10165	WP	012897346.1	D	V	I	I	F	I	D	E	L	H	T	I	G	A	G	G	.	G	M	D	S	V	N	D	A	A	N	I	L	K	P	A	L	A	R	G	D	F	Q	M	V	G	A	T	T	Y	H	E	Y	K	Y	.	I	E	K	D	E	A	L	E	R	R	L	A	R	I	N	V	D	E	P	S	P	D	E	A	I	A	I	L		365																																																																																																																																																																																																																																																																																																																																																																																															
NTDB	id	290	KZH43	RS10025	WP	001109677.1	Q	V	I	L	F	I	D	E	L	H	T	I	M	G	S	G	S	.	G	I	D	S	T	L	D	A	A	N	I	L	K	P	A	L	A	R	G	T	L	R	T	V	G	A	T	T	Q	E	E	Y	K	H	.	I	E	K	D	A	A	L	S	R	R	F	A	K	V	T	I	E	E	P	S	V	A	D	S	M	T	I	L		378																																																																																																																																																																																																																																																																																																																																																																																														
NTDB	id	289	SPD	RS10700	WP	001109677.1	Q	V	I	L	F	I	D	E	L	H	T	I	M	G	S	G	S	.	G	I	D	S	T	L	D	A	A	N	I	L	K	P	A	L	A	R	G	T	L	R	T	V	G	A	T	T	Q	E	E	Y	K	H	.	I	E	K	D	A	A	L	S	R	R	F	A	K	V	T	I	E	E	P	S	V	A	D	S	M	T	I	L		378																																																																																																																																																																																																																																																																																																																																																																																														
NTDB	id	287	SP	RS11210	WP	001109712.1	Q	V	I	L	F	I	D	E	L	H	T	I	M	G	S	G	S	.	G	I	D	S	T	L	D	A	A	N	I	L	K	P	A	L	A	R	G	T	L	R	T	V	G	A	T	T	Q	E	E	Y	K	H	.	I	E	K	D	A	A	L	S	R	R	F	A	K	V	T	I	E	E	P	S	V	A	D	S	M	T	I	L		378																																																																																																																																																																																																																																																																																																																																																																																														
NTDB	id	377	SMU	RS09275	WP	002262344.1	H	I	V	L	F	I	D	E	L	H	T	I	M	G	S	G	S	.	G	I	D	S	T	L	D	A	A	N	I	L	K	P	A	L	A	R	G	S	L	R	T	I	G	A	T	T	Q	E	E	Y	K	H	.	I	E	K	D	A	A	L	S	R	R	F	A	K	V	T	I	E	E	P	S	E	E	A	Y	Q	I	L		382																																																																																																																																																																																																																																																																																																																																																																																															
NTDB	id	297	STER	RS00545	WP	011680614.1	K	I	I	L	F	I	D	E	L	H	T	I	I	G	S	G	S	.	G	I	D	S	T	L	D	A	A	N	I	L	K	P	A	L	A	R	G	T	L	H	M	V	G	A	T	T	Q	A	E	Y	K	H	.	I	E	K	D	A	A	L	S	R	R	F	A	K	V	T	I	E	E	P	S	V	S	E	A	D	I	L		385																																																																																																																																																																																																																																																																																																																																																																																															
NTDB	id	329	STU	RS10020	WP	011225298.1	K	I	I	L	F	I	D	E	L	H	T	I	I	G	S	G	S	.	G	I	D	S	T	L	D	A	A	N	I	L	K	P	A	L	A	R	G	T	L	H	M	V	G	A	T	T	Q	A	E	Y	K	H	.	I	E	K	D	A	A	L	S	R	R	F	A	K	V	T	I	E	E	P	S	V	S	E	A	D	I	L		385																																																																																																																																																																																																																																																																																																																																																																																															
consensus							*	*	*	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

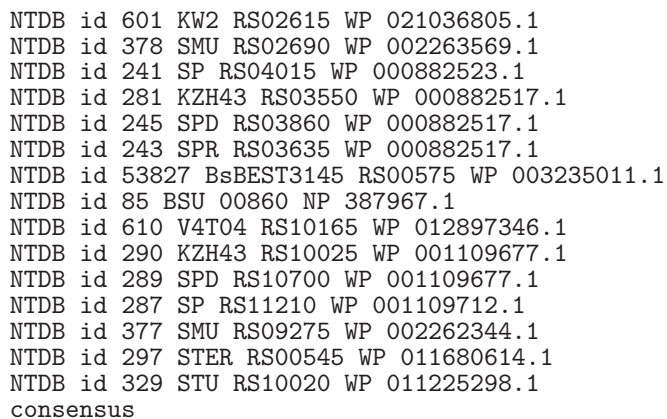
logo

NTDB id 601 KW2 RS02615 WP 021036805.1	RGIQARYEDYHHVKYTDEAIEAAHLSNRYIQDRFLPDKAIDLLDESGSKNLT	KLF..VDPEDINRR	IADAENKKNEAT	373
NTDB id 378 SMU RS02690 WP 002263569.1	KGIQPKYEDYHHVKYTDEAIEAAANLSNRYIQDRFLPDKAIDLLDEAGSKMNL	TNLF..VDPKEIDHRL	IEAENLKAQAT	380
NTDB id 241 SP RS04015 WP 000882523.1	KGIQKKYEDYHHVQYTDAIEAAATLSNRYIQDRFLPDKAIDLLDEAGSKMNL	TNLF..VDPKVIDQR	LIEAENLKSQAT	379
NTDB id 281 KZH43 RS03550 WP 000882517.1	KGIQKKYEDYHHVQYTDAIEAAATLSNRYIQDRFLPDKAIDLLDEAGSKMNL	TNLF..VDPKVIDQR	LIEAENLKSQAT	379
NTDB id 245 SPD RS03860 WP 000882517.1	KGIQKKYEDYHHVQYTDAIEAAATLSNRYIQDRFLPDKAIDLLDEAGSKMNL	TNLF..VDPKVIDQR	LIEAENLKSQAT	379
NTDB id 243 SPR RS03635 WP 000882517.1	KGIQKKYEDYHHVQYTDAIEAAATLSNRYIQDRFLPDKAIDLLDEAGSKMNL	TNLF..VDPKVIDQR	LIEAENLKSQAT	379
NTDB id 53827 BsBEST3145 RS00575 WP 003235011.1	QGLRDRYEAHHRVSI	TDDAIEAAVKLSDRYISDRFLPDKAIDL	IDEAGSKVRLRSFTTPPNLKELEQKLDEVRKEKDA	431
NTDB id 85 BSU 00860 NP 387967.1	QGLRDRYEAHHRVSI	TDDAIEAAVKLSDRYISDRFLPDKAIDL	IDEAGSKVRLRSFTTPPNLKELEQKLDEVRKEKDA	431
NTDB id 610 V4T04 RS10165 WP 012897346.1	QGLREKFEDYHQVKFTDQAIKSAVMLSVRYMTSRKLPDKAIDLLDEAAAAVKIS	VKNQVQTKRL	LEKELAAEAEELSEAV	445
NTDB id 290 KZH43 RS10025 WP 001109677.1	QGLKATYEKHHRVQITDEAVETAVKMAHRYLTSRHL	LPDASIDLLDEAAATVQNKAKHVKA	DDSDL....S....PADKAL	450
NTDB id 289 SPD RS10700 WP 001109677.1	QGLKATYEKHHRVQITDEAVETAVKMAHRYLTSRHL	LPDASIDLLDEAAATVQNKAKHVKA	DDSDL....S....PADKAL	450
NTDB id 287 SP RS11210 WP 001109712.1	QGLKATYEKHHRVQITDEAVETAVKMAHRYLTSRHL	LPDASIDLLDEAAATVQNKAKHVKA	DDSDL....S....PADKAL	450
NTDB id 377 SMU RS09275 WP 002262344.1	LGLKKS YET YHHV IISDAAVMAAVKGAHRYLSGKNLPDS	ASIDLLDEASATVQGLVKK..KAPAYL....T....DL	DHAL	452
NTDB id 297 STER RS00545 WP 011680614.1	NGLRSSYEDYHRVTITDAAVETAVKAAHRYLTSKNLPDS	ASIDLLDEASATVQVRIKK..EDKREI....T....PL	DEAL	455
NTDB id 329 STU RS10020 WP 011225298.1	NGLRSSYEDYHRVTITDAAVETAVKAAHRYLTSKNLPDS	ASIDLLDEASATVQVRIKK..EAKREI....T....PL	DEAL	455
consensus				

```

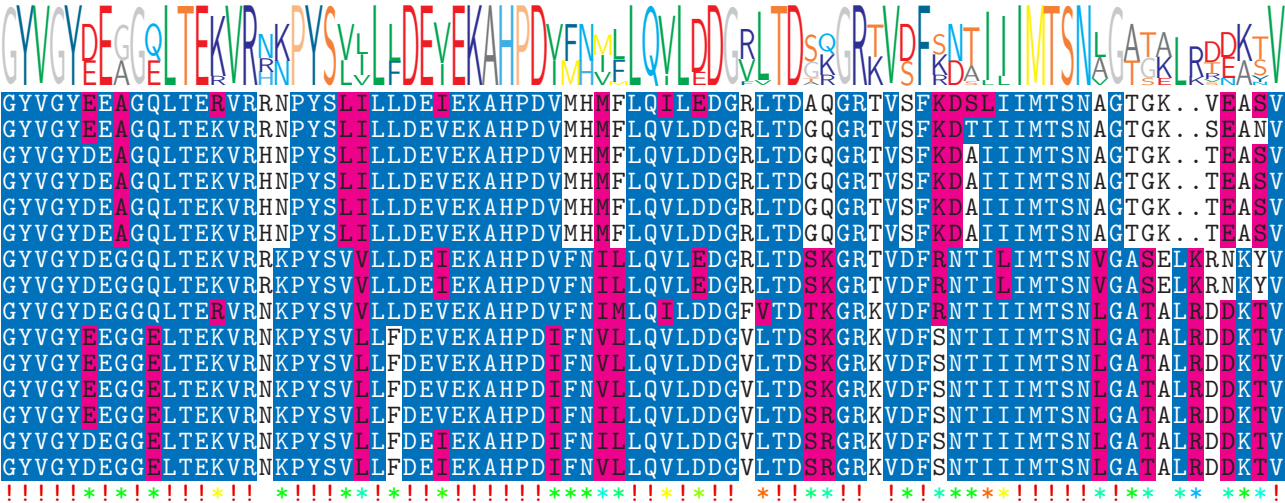
NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
NTDB id 243 SPR RS03635 WP 000882517.1
NTDB id 53827 BsBEST3145 RS00575 WP 003235011.1
NTDB id 85 BSU 00860 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

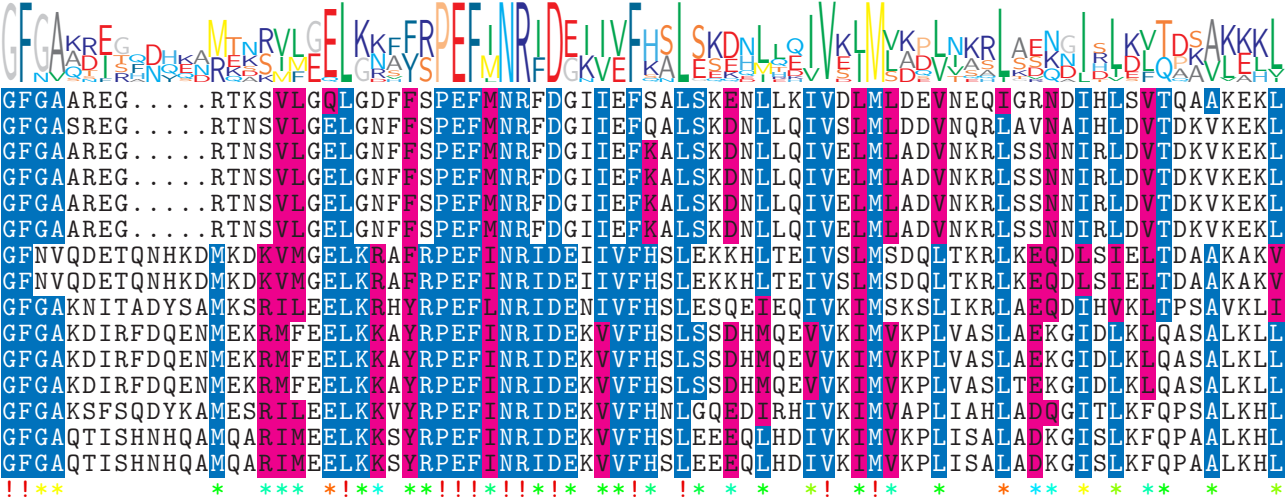
NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
NTDB id 243 SPR RS03635 WP 000882517.1
NTDB id 53827 BsBEST3145 RS00575 WP 003235011.1
NTDB id 85 BSU 00860 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



605
612
611
611
611
611
671
671
680
675
675
675
678
681
681

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 53827 BsBEST3145 RS00575 WP 003235011.1
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



680
687
686
686
686
686
751
751
760
755
755
755
758
761
761

logo

NTDB id 601 KW2 RS02615 WP 021036805.1	VDLGYNPAMGARPLRRTIQENIEDSIADFYIEHPEYKQ.LVADLIDDKIIVISNQTQETAETTTDEEVPAAE	748
NTDB id 378 SMU RS02690 WP 002263569.1	VDLGYDPKMGARPLRRTIQEHIEDAITDFYIEHPEQKE.LKAIMTSNCKIIVIKASNK.VETVTKATSD.	753
NTDB id 241 SP RS04015 WP 000882523.1	VDLGYDPKMGARPLRRTIQDYIEDTITDYYLENPSEKD.LKAVMTSKGNIQIKSAKK.AEVKSSEKEK.	752
NTDB id 281 KZH43 RS03550 WP 000882517.1	VDLGYDPKMGARPLRRTIQDYIEDTITDYYLENPSEKD.LKAVMTSKGNIQIKSAKK.AEVKSSEKEK.	752
NTDB id 245 SPD RS03860 WP 000882517.1	VDLGYDPKMGARPLRRTIQDYIEDTITDYYLENPSEKD.LKAVMTSKGNIQIKSAKK.AEVKSSEKEK.	752
NTDB id 243 SPR RS03635 WP 000882517.1	VDLGYDPKMGARPLRRTIQDYIEDTITDYYLENPSEKD.LKAVMTSKGNIQIKSAKK.AEVKSSEKEK.	752
NTDB id 53827 BsBEST3145 RS00575 WP 003235011.1	AEEGVLDLEYGARPLRRRAIQKHVEDRLSEELLRCNIHKGQHIVLVDVEDGEFVVKTTAKTN.....	810
NTDB id 85 BSU 00860 NP 387967.1	AEEGVLDLEYGARPLRRRAIQKHVEDRLSEELLRCNIHKGQHIVLVDVEDGEFVVKTTAKTN.....	810
NTDB id 610 V4T04 RS10165 WP 012897346.1	AEVGFDPPEYGARPLRRKALQKEVEDLLSEQLLSGEIKAGNHVSTIGASNKKIKIAQIV.....	816
NTDB id 290 KZH43 RS10025 WP 001109677.1	ANQGYDPEMGARPLRRTIQTEVEDKLAELLKGDIVAGSILKIGVKAQQLKFDIA.....	810
NTDB id 289 SPD RS10700 WP 001109677.1	ANQGYDPEMGARPLRRTIQTEVEDKLAELLKGDIVAGSILKIGVKAQQLKFDIA.....	810
NTDB id 287 SP RS11210 WP 001109712.1	ANQGYDPEMGARPLRRTIQTEVEDKLAELLKGDIVAGSTLKIIGVKAQQLKFDIA.....	810
NTDB id 377 SMU RS09275 WP 002262344.1	ALAGYDAEMGARPLRRTIQTEVEDKLAELLKSGKLASGQTLKIGIQKEKLKFDIV.....	813
NTDB id 297 STER RS00545 WP 011680614.1	AKDGYDIEMGARPLRRTIQTEVEDKLELLLGQGVVSGQTLKIGCSKDKLTFTTVV.....	816
NTDB id 329 STU RS10020 WP 011225298.1	AKDGYDIEMGARPLRRTIQTEVEDKLELLLGQGVVSGQTLKIGCSKDKLTFTTVV.....	816
consensus	* * * * * * * * * * * * * * * * * * * * * * * *	

-  non conserved
-  similar
-  > 50% conserved