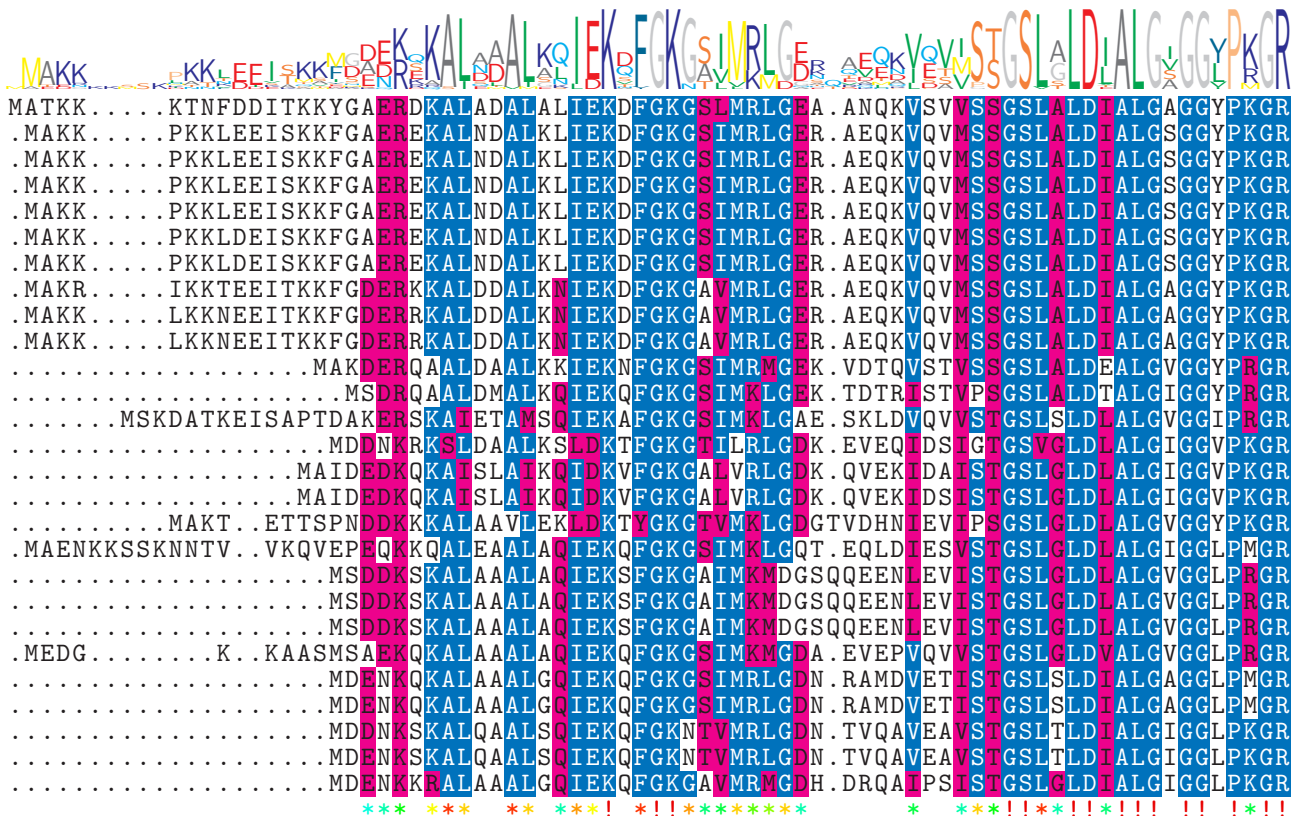


logo

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 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 978577 MGAS37641 RS08905 WP 010922753.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
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 RA0C 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 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

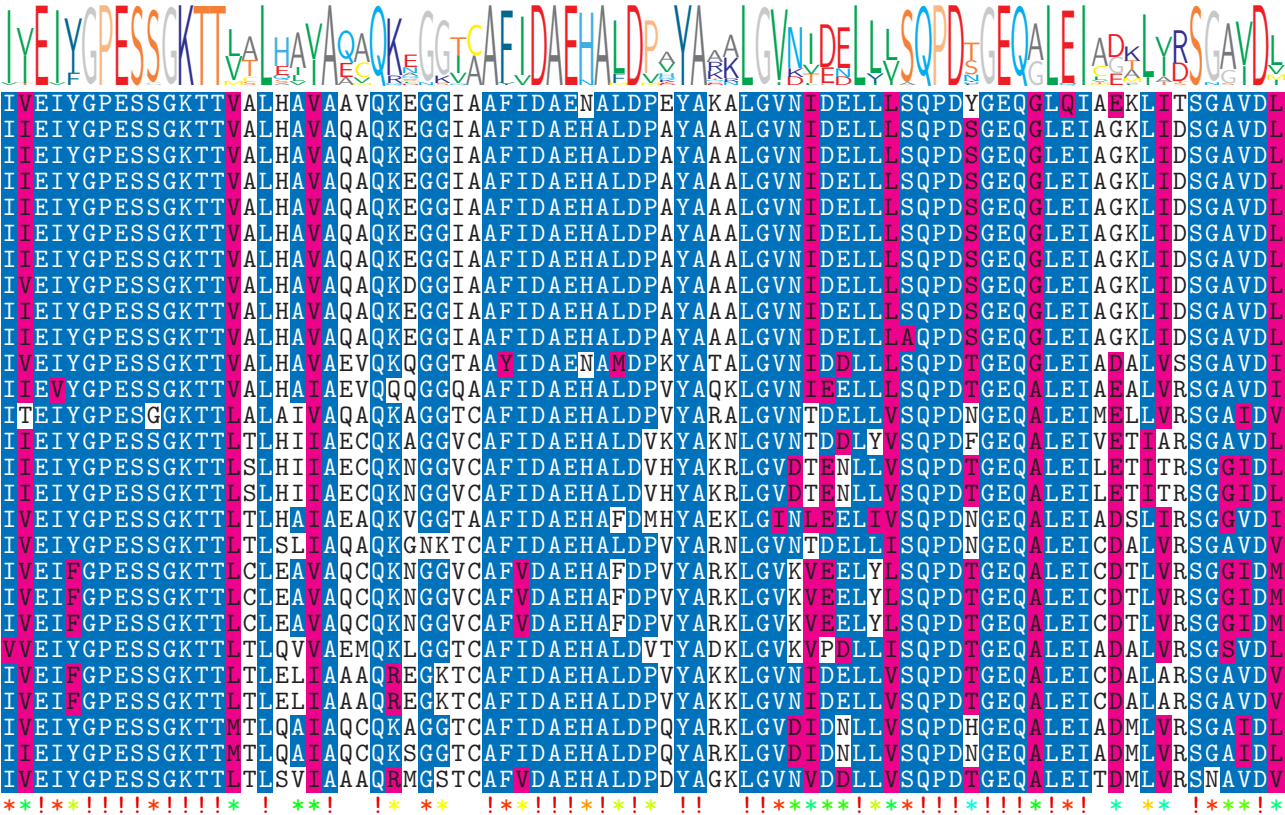
consensus



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 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 978577 MGAS37641 RS08905 WP 010922753.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
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 RA0C 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 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



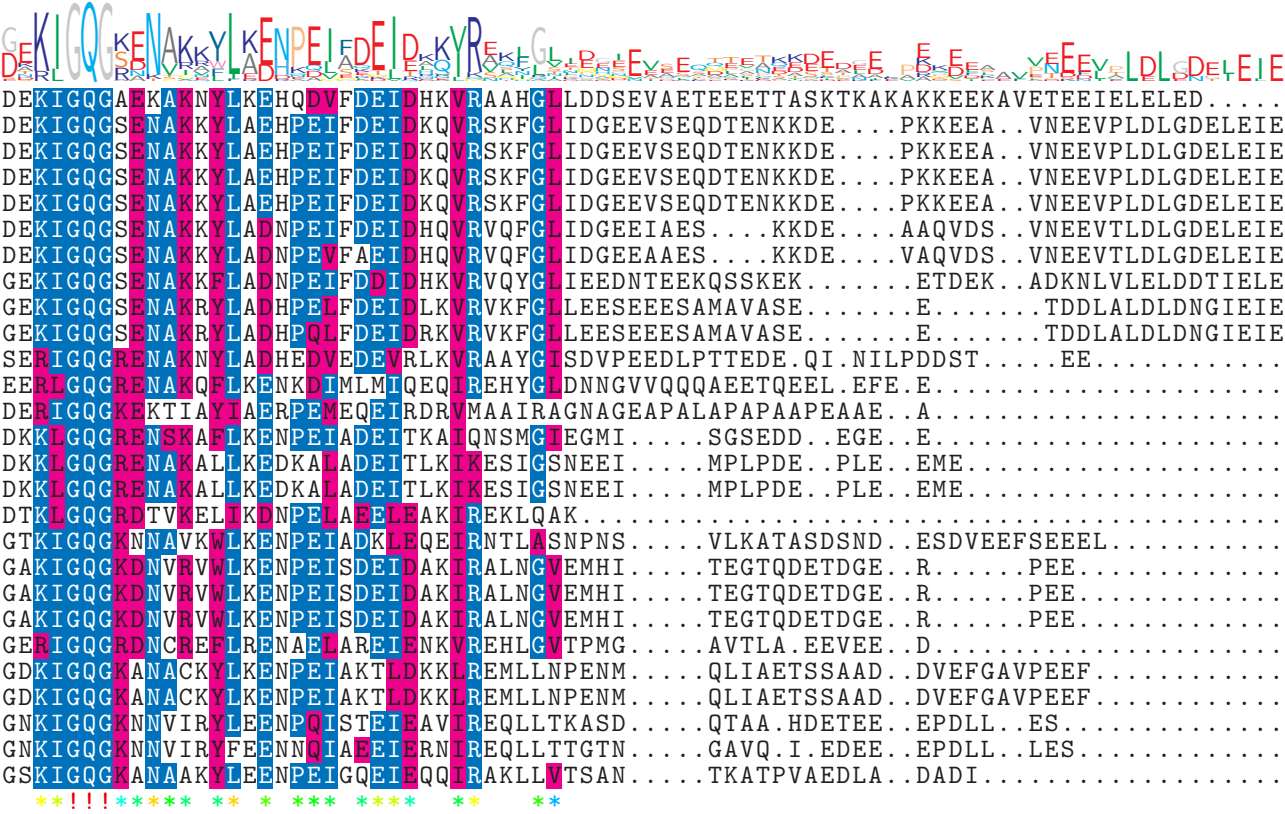
154
153
153
153
153
153
153
153
153
153
153
140
138
152
139
141
141
148
156
140
140
140
148
139
139
139
139
139

logo

NTDB id 600 KW2 RS01765 WP 011675413.1	SVRLDVRGSTKIEEGS.GDNKTD	IGKIDTKIKVVKNKVAPPFKVAVL	DIMFEGEGISSTGELINIAVEEG	ITKKS	GAW	FAYN	312	
NTDB id 269 KZH43 RS08665 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKAEV	EIMYEGEGISKTGELIKIASDL	DIIKK	KAGAW	YSYK	311	
NTDB id 228 SPD RS09265 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKAEV	EIMYEGEGISKTGELIKIASDL	DIIKK	KAGAW	YSYK	311	
NTDB id 194 SPR RS08825 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKAEV	EIMYEGEGISKTGELIKIASDL	DIIKK	KAGAW	YSYK	311	
NTDB id 159 SP RS09750 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKAEV	EIMYEGEGISKTGELIKIASDL	DIIKK	KAGAW	YSYK	311	
NTDB id 499 SM12261 RS08315 WP 078228268.1	SVRLDVRGSTQIKGTG.DQKDTN	VGKETKIKVVKNKVAPPFKAEFV	EIMYEGEGISKTGELIKIASDL	DIIKK	KAGAW	YSYK	311	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	SVRLDVRGSTQIKGTG.DQKDTN	VGKETKIKVVKNKVAPPFKAEFV	EIMYEGEGISKTGELIKIASDL	DIIKK	KAGAW	YSYK	311	
NTDB id 408 SMU RS09530 WP 002262392.1	SVRLDVRGNTQIKGTG.EQKDSN	IGKETKIKVVKNKVAPPFKAEFV	EIIYEGEGISRTGELVKIASDL	GIIQK	KAGAW	YSYN	311	
NTDB id 978577 MGAS37641 RS08905 WP 010922753.1	SVRLDVRGTTQIKGTG.DQKDS	IGKETKIKVVKNKVAPPFKVAEV	EIMYEGEGISRTGELVKIASDL	DIIQK	KAGAW	FSYN	311	
NTDB id 453 Spy49 1753c ACI62003.1	SVRLDVRGTTQIKGTG.DQKDS	IGKETKIKVVKNKVAPPFKVAEV	EIMYEGEGISRTGELVKIASDL	DIIQK	KAGAW	FSYN	311	
NTDB id 625 LCA RS02525 WP 0011374196.1	TVRLEVRRAETIKNGT....DM	IGNRARIKVVKNKVAPPFKVAEV	DIMYGGISRTGELVDMAVEK	DIINK	SGSW	YSYG	294	
NTDB id 115 BSU 16940 NP 389576.2	SVRLEVRRAEQLKQGN....DV	MGNKTKIKVVKNKVAPPFRTAEV	DIMYEGEGISKEGETIDLGTEL	DI	VQK	SGSW	YSYE	292
NTDB id 1313 DR RS12030 WP 010888966.1	SVRLDVRKIGQ....PTKVGND	AVANTVKIKTVKNKVAAPFKEVEL	ALVYCKGCFDQLSDLVGLA	ADM	DIIKK	KAG	SFYSYG	307
NTDB id 1245 Cj1673c YP 002345041.1	SVRLDVRKQVAT....L.KQNE	EEPIGNRVKVKVVKNKVAPPFRQAEF	DVMFEGEGLSREGELIDYG	VKLD	DI	VQK	SGAWFSYK	294
NTDB id 1214 NCTC11637 00359 SQJ03206.1	SVRIDIRRIAS....L.KQNE	EQHIGNRAKAKVVKNKVAPPFRQAEF	DIMFEGEGISKEGETIDYG	VKLD	DI	VQK	SGAWLSYQ	296
NTDB id 1211 C694 RS00795 WP 000963128.1	SVRIDIRRIAS....L.KQNE	EQHIGNRAKAKVVKNKVAPPFRQAEF	DIMFEGEGISKEGETIDYG	VKLD	DI	VQK	SGAWLSYQ	296
NTDB id 1334 RAOC RS04870 WP 004918236.1	SVRIDIRRLSDTGKIKDKSGEV	IGNRTKVKVVKNKVAPPFKSAEF	DIMYEGEVSKVGEILDVATDL	DIIQK	SGS	WFSYQ	307	
NTDB id 1389 A4U84 RS07560 WP 021112712.1	SVRLDIRRCGV....V.KDGEI	IGSETKVKVVKNKVAPPFRQAEF	DIMYEGEGISRMNELLILAEANG	FIKK	SGAW	FSYD	310	
NTDB id 1130 NGFG RS03960 WP 003688695.1	SVRLDIRRTGS....I.KKGEV	LGNETRVKVIKNKVAPPFRQAEF	DIIYEGEGISWEGELIDIG	VKN	DI	INK	SGAWYSYN	294
NTDB id 1124 NGFG RS03960 WP 003688695.1	SVRLDIRRTGS....I.KKGEV	LGNETRVKVIKNKVAPPFRQAEF	DIIYEGEGISWEGELIDIG	VKN	DI	INK	SGAWYSYN	294
NTDB id 1123 OK783 RS03845 WP 003688695.1	SVRLDIRRTGS....I.KKGEV	LGNETRVKVIKNKVAPPFRQAEF	DIIYEGEGISWEGELIDIG	VKN	DI	INK	SGAWYSYN	294
NTDB id 1427 RS RS02760 WP 011000510.1	SVRLDIRRIGS....I.KKGEV	VGNETKVKVVKNKVAPPFRQAEF	DIIYGCAGVSREGETIDLG	VKAEK	VVEK	SGAW	YSYN	302
NTDB id 1165 A1552VC RS01565 WP 000344154.1	SVRLDIRRTGA....I.KKGEV	VGNETRIKVVKNKTAAPFKEANTQ	IMYGGGFNRREGELIDLGV	HKHM	VVEK	SGAW	YSYN	293
NTDB id 1142 GTF74 RS11550 WP 000344154.1	SVRLDIRRTGA....I.KKGEV	VGNETRIKVVKNKTAAPFKEANTQ	IMYGGGFNRREGELIDLGV	HKHM	VVEK	SGAW	YSYN	293
NTDB id 1022 ACIAD RS06390 WP 004925639.1	SVRLDIRRIGQ....V.KEGDEI	IGSETKVKVVKNKVAPPFRQAEF	IIYCGKGNQLGELVDLAV	QQ	DI	VQK	KAGAWYSYQ	293
NTDB id 1074 ABD1 RS10195 WP 000344167.1	SVRLDIRRIGQ....V.KEGDEI	IGSETKVKVVKNKVAPPFRQAEF	IIYCGKGNQLGELVDLAV	QQ	DI	VQK	KAGAWYSYQ	293
NTDB id 1205 PSJM300 05545 AFN77183.1	SVRLDIRRTGA....V.KEGDEV	VGSETRVKVVKNKVAPPFRQAEF	IIYCGKGIYRNGEIDLGV	QQGL	VVEK	SGAW	YAYK	293
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 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 978577 MGAS37641 RS08905 WP 010922753.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
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 RA0C 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 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



387
385
385
385
385
381
381
382
377
377
355
348
363
343
347
347
343
372
348
348
348
352
354
354
349
349
347

logo

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	408	SMU	RS09530	WP	002262392.1	D..	383
NTDB id	978577	MGAS37641	RS08905	WP	010922753.1	D..	378
NTDB id	453	Spy49	1753c	ACI62003.1		D..	378
NTDB id	625	LCA	RS02525	WP	011374196.1	...	355
NTDB id	115	BSU	16940	NP	389576.2	...	348
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	RA0C	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	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
- $\geq 50\%$ conserved