

logo



NTDB id 600 KW2 RS01765 WP 011675413.1	MATKKK....TNFDDITKKYGAERDKALADALALIEKD	FGKGSIMRLGER	.ANQKVS	VSSGSLALDI	ALGAGGYPKGR	74		
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAKKP....KKLEEISKKFGE	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGR	73		
NTDB id 228 SPD RS09265 WP 001085462.1	.MAKKP....KKLEEISKKFGE	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGR	73		
NTDB id 194 SPR RS08825 WP 001085462.1	.MAKKP....KKLEEISKKFGE	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGR	73		
NTDB id 159 SP RS09750 WP 001085462.1	.MAKKP....KKLEEISKKFGE	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGR	73		
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAKKP....KKLDEISKKFGE	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGR	73		
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAKKP....KKLDEISKKFGE	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGR	73		
NTDB id 453 Spy49 1753c ACI62003.1	.MAKKL....KKNEEITKKFGE	DERRKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQVMSSGSLALDI	ALGAGGYPKGR	73		
NTDB id 408 SMU RS09530 WP 002262392.1	.MAKRI....KKTEEITKKFGE	DERRKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQVMSSGSLALDI	ALGAGGYPKGR	73		
NTDB id 115 BSU 16940 NP 389576.2	.....MSDRQAALDMALKQIEKQ	FGKGSIMKLGK	.TDTRI	ISTVPSGSLALDI	TALGIGGYPRGR	58		
NTDB id 625 LCA RS02525 WP 011374196.1	.....MAKDERQAALDAALKKIEKN	FGKGSIMRMGEK	.VDTQV	STVSSGSLALDEAL	GVGGYPRGR	60		
NTDB id 1313 DR RS12030 WP 010888966.1	.....MSKDATKEISAPTDAKERSKAT	ETAMSI	IEKAFGKGSIMKLGAE	.SKLDVQV	VSTGSLSLDLALGVGGIPRGR	72		
NTDB id 1245 Cj1673c YP 002345041.1	.....MDNKRKSLDAALKS	LDKTFGKGTILRLGDK	.EVEQ	IDSIGTGSVGLDL	ALGIGGVPKGR	59		
NTDB id 1214 NCTC11637 00359 SQJ03206.1	.....MAIDEDKQKATISLAIKQID	KVFGKGA	LVRGDK.QVEK	IDAISTGSLGLDL	ALGIGGVPKGR	61		
NTDB id 1211 C694 RS00795 WP 000963128.1	.....MAIDEDKQKATISLAIKQID	KVFGKGA	LVRGDK.QVEK	IDSISTGSLGLDL	ALGIGGVPKGR	61		
NTDB id 1334 RAOC RS04870 WP 004918236.1	.....MAKT..ETSPND	DKKALAAVLEKLDKTYGKGT	VMKLG	GTVDHNI	IEVIPSGSLGLDLALGVGGYPKGR	68		
NTDB id 1130 NGFG RS03960 WP 003688695.1	.....MSDDKSKALAAALAIQIEKS	FGKGAIMKMDGSQ	QEENLEVISTGSLGLDL	ALGVGGLPRGR	60			
NTDB id 1124 NGFG RS03960 WP 003688695.1	.....MSDDKSKALAAALAIQIEKS	FGKGAIMKMDGSQ	QEENLEVISTGSLGLDL	ALGVGGLPRGR	60			
NTDB id 1123 OK783 RS03845 WP 003688695.1	.....MSDDKSKALAAALAIQIEKS	FGKGAIMKMDGSQ	QEENLEVISTGSLGLDL	ALGVGGLPRGR	60			
NTDB id 1427 RS RS02760 WP 011000510.1	.....MEDGK..KAASMSAEKQK	ALAAALAIQIEKQ	FGKGSIMKMGDA	.EVEPVQV	VSTGSLGLDV	ALGVGGLPRGR	68	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	.....MDNKS	KALQAALSQIEKQ	FGKNTVMRLGDN	.TVQAVEAV	STGSLTLDI	ALGIGGLPKGR	59	
NTDB id 1074 ABD1 RS10195 WP 000344167.1	.....MDENKS	KALQAALSQIEKQ	FGKNTVMRLGDN	.TVQAVEAV	STGSLTLDI	ALGIGGLPKGR	59	
NTDB id 1205 PSJM300 05545 AFN77183.1	.....MDENKK	RALAAALGQIEKQ	FGKGAVMRMGDH	.DRQAT	PSISTGSLGLDI	ALGIGGLPKGR	59	
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENK	KSSKNNTV.VKQVEPEQKK	QALEAALAIQIEKQ	FGKGSIMKLGQT	.EQLDIESV	STGSLGLDL	ALGIGGLPMGR	76
NTDB id 117721 AW43 RS07565 WP 005724816.1	.....MATKEKN	KALAAALGQIEKQ	FGKGSIMKLGDT	.QALDVEAV	STGSLSLDV	ALGIGGLPMGR	61	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	.....MDENK	QKALAAALGQIEKQ	FGKGSIMRLGDN	.RAMDVET	ISTGSLSLDI	ALGAGGLPMGR	59	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	.....MDENK	QKALAAALGQIEKQ	FGKGSIMRLGDN	.RAMDVET	ISTGSLSLDI	ALGAGGLPMGR	59	
consensus	*** ** *	***! *!*****	*	***!****!!	!!	***!		





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NTDB id 600	KW2	RS01765	WP 011675413.1	SVRLDVRG	STKIEEGS	.GDNKTQ	IGK	ITK	IKVV	KNKV	VAPP	FK	VALV	DIM	F	GEGIS	STGEL	LN	IAVE	E	GI	T	KK	S	G	A	W	F	A	Y	N	312																																														
NTDB id 269	KZH43	RS08665	WP 001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGK	ETK	IKVV	KNKV	VAPP	FK	EAVV	E	IMY	GEGIS	KTGEL	L	KL	IASD	L	D	I	KK	A	G	A	W	Y	S	Y	K	311																																													
NTDB id 228	SPD	RS09265	WP 001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGK	ETK	IKVV	KNKV	VAPP	FK	EAVV	E	IMY	GEGIS	KTGEL	L	KL	IASD	L	D	I	KK	A	G	A	W	Y	S	Y	K	311																																													
NTDB id 194	SPR	RS08825	WP 001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGK	ETK	IKVV	KNKV	VAPP	FK	EAVV	E	IMY	GEGIS	KTGEL	L	KL	IASD	L	D	I	KK	A	G	A	W	Y	S	Y	K	311																																													
NTDB id 159	SP	RS09750	WP 001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGK	ETK	IKVV	KNKV	VAPP	FK	EAVV	E	IMY	GEGIS	KTGEL	L	KL	IASD	L	D	I	KK	A	G	A	W	Y	S	Y	K	311																																													
NTDB id 527	SMSK321	RS11065	WP 001085454.1	SVRLDVRG	STQIKGTG	.DQKDTN	VGK	ETK	IKVV	KNKV	VAPP	FK	EAFV	E	IMY	GEGIS	KTGEL	L	KL	IASD	L	D	I	KK	A	G	A	W	Y	S	Y	K	311																																													
NTDB id 499	SM12261	RS08315	WP 078228268.1	SVRLDVRG	STQIKGTG	.DQKDTN	VGK	ETK	IKVV	KNKV	VAPP	FK	EAFV	E	IMY	GEGIS	KTGEL	L	KL	IASD	L	D	I	KK	A	G	A	W	Y	S	Y	K	311																																													
NTDB id 453	Spy49	1753c	ACI62003.1	SVRLDVRG	TQIKGTG	.DQKDS	IGK	ETK	IKVV	KNKV	VAPP	FK	VAE	V	E	IMY	GEGIS	R	TGEL	V	K	I	A	S	D	L	I	I	Q	K	A	G	A	W	F	S	Y	N	311																																							
NTDB id 408	SMU	RS09530	WP 002262392.1	SVRLDVRG	NTQIKGTG	.EQKDS	IGK	ETK	IKVV	KNKV	VAPP	FK	EAFV	E	I	I	Y	GEGIS	R	TGEL	V	K	I	A	S	D	L	G	I	I	Q	K	A	G	A	W	Y	S	Y	N	311																																					
NTDB id 115	BSU	16940	NP 389576.2	SVRLEVR	RAEQLKQGN	. . . . .	D	M	G	N	K	T	K	I	K	V	V	K	N	K	V	A	P	P	F	R	T	A	E	V	D	I	M	Y	G	E	G	I	S	K	E	G	E	T	I	D	L	G	T	E	L	D	I	V	Q	K	S	G	S	W	Y	S	Y	E	292													
NTDB id 625	LCA	RS02525	WP 011374196.1	TVRLEVR	RAETIKNGT	. . . . .	D	M	I	G	N	R	A	R	I	K	V	V	K	N	K	V	A	P	P	F	K	V	A	E	V	D	I	M	Y	G	Q	G	I	S	R	T	G	E	L	V	D	M	A	V	E	K	D	I	N	K	S	G	S	W	Y	S	Y	G	294													
NTDB id 1313	DR	RS12030	WP 010888966.1	SVRLDVR	KIG. . . .	QPTKVG	NDA	V	A	N	T	V	K	I	K	T	V	K	N	K	V	A	A	P	F	K	E	V	E	L	A	L	V	Y	G	K	G	F	D	Q	L	S	D	L	V	G	L	A	A	D	M	D	I	I	K	K	A	G	S	F	Y	S	Y	G	307													
NTDB id 1245	Cj1673c	YP 002345041.1	SVRLDVR	KVA. . . .	TL.KQN	E	E	P	I	G	N	R	V	K	V	V	K	N	K	V	A	P	P	F	R	Q	A	E	F	D	V	M	F	G	E	L	S	R	E	G	E	L	I	D	Y	G	V	K	L	D	I	V	D	K	S	G	A	W	F	S	Y	K	294															
NTDB id 1214	NCTC11637	00359	SQJ03206.1	SVR	I	D	I	R	R	I	A	. . . .	A	L	.K	Q	N	E	Q	H	I	G	N	R	A	K	A	K	V	V	K	N	K	V	A	P	P	F	R	E	A	E	F	D	I	M	F	G	E	G	I	S	K	E	G	E	T	I	D	Y	G	V	K	L	D	I	V	D	K	S	G	A	W	L	S	Y	Q	296
NTDB id 1211	C694	RS00795	WP 000963128.1	SVR	I	D	I	R	R	I	A	. . . .	S	L	.K	Q	N	E	Q	H	I	G	N	R	A	K	A	K	V	V	K	N	K	V	A	P	P	F	R	E	A	E	F	D	I	M	F	G	E	G	I	S	K	E	G	E	T	I	D	Y	G	V	K	L	D	I	V	D	K	S	G	A	W	L	S	Y	Q	296
NTDB id 1334	RAOC	RS04870	WP 004918236.1	SVR	I	D	I	R	R	S	L	S	D	T	G	K	I	K	D	K	S	G	E	V	I	G	N	R	T	K	V	V	K	N	K	V	A	P	P	F	K	S	A	E	F	D	I	M	Y	G	E	G	V	S	K	V	G	E	L	D	V	A	T	D	L	I	I	Q	K	S	G	S	W	F	S	Y	Q	307
NTDB id 1130	NGFG	RS03960	WP 003688695.1	SVRLD	I	R	R	T	G	. . . .	S	I	.K	K	G	E	E	V	L	G	N	E	T	R	V	K	V	I	K	N	K	V	A	P	P	F	R	Q	A	E	F	D	I	L	Y	G	E	G	I	S	W	E	G	E	L	I	D	I	G	V	K	N	D	I	N	K	S	G	A	W	Y	S	Y	N	294			
NTDB id 1124	NGFG	RS03960	WP 003688695.1	SVRLD	I	R	R	T	G	. . . .	S	I	.K	K	G	E	E	V	L	G	N	E	T	R	V	K	V	I	K	N	K	V	A	P	P	F	R	Q	A	E	F	D	I	L	Y	G	E	G	I	S	W	E	G	E	L	I	D	I	G	V	K	N	D	I	N	K	S	G	A	W	Y	S	Y	N	294			
NTDB id 1123	OK783	RS03845	WP 003688695.1	SVRLD	I	R	R	T	G	. . . .	S	I	.K	K	G	E	E	V	L	G	N	E	T	R	V	K	V	I	K	N	K	V	A	P	P	F	R	Q	A	E	F	D	I	L	Y	G	E	G	I	S	W	E	G	E	L	I	D	I	G	V	K	N	D	I	N	K	S	G	A	W	Y	S	Y	N	294			
NTDB id 1427	RS	RS02760	WP 011000510.1	SVRLD	I	R	R	I	G	. . . .	S	I	.K	K	G	D	E	V	V	G	N	E	T	K	V	V	V	K	N	K	V	A	P	P	F	R	E	A	I	F	D	I	L	Y	G	A	G	V	S	R	E	G	E	T	I	D	L	G	V	E	A	K	V	V	E	K	S	G	A	W	Y	S	Y	N	302			
NTDB id 1022	ACIAD	RS06390	WP 004925639.1	SVRLD	I	R	R	I	G	. . . .	Q	V	.K	E	G	D	E	I	I	G	S	E	T	K	V	V	V	K	N	K	M	A	P	P	F	R	E	A	I	F	Q	I	L	Y	G	K	G	V	N	Q	L	G	E	L	V	D	L	A	V	Q	Q	N	I	V	Q	K	A	G	A	W	Y	S	Y	Q	293			
NTDB id 1074	ABD1	RS10195	WP 000344167.1	SVRLD	I	R	R	I	G	. . . .	Q	V	.K	E	G	D	E	I	V	G	S	E	T	K	V	V	V	K	N	K	M	A	P	P	F	K	E	A	I	F	Q	I	L	Y	G	K	G	T	N	Q	L	G	E	L	V	D	L	A	V	Q	Q	D	I	V	Q	K	A	G	A	W	Y	S	Y	Q	293			
NTDB id 1205	PSJM300	05545	AFN77183.1	SVRLD	I	R	R	T	G	. . . .	A	V	.K	E	G	D	E	V	V	G	S	E	T	R	V	V	V	K	N	K	V	A	P	P	F	R	Q	A	E	F	Q	I	L	Y	G	K	G	I	Y	R	N	G	E	T	I	D	L	G	V	Q	Q	L	V	E	K	S	G	A	W	Y	A	Y	K	293				
NTDB id 1389	A4U84	RS07560	WP 021112712.1	SVRLD	I	R	R	C	G	. . . .	V	V	.K	D	G	D	E	I	I	G	S	E	T	K	V	V	V	K	N	K	V	A	P	P	F	R	E	V	Q	F	D	I	M	Y	G	E	G	I	S	R	M	N	E	L	L	I	L	A	E	A	N	G	F	I	K	K	S	G	A	W	F	S	Y	D	310			
NTDB id 117721	AW43	RS07565	WP 005724816.1	SVRLD	I	R	R	T	G	. . . .	A	I	.K	E	G	E	E	V	I	G	N	E	T	R	V	V	V	K	N	K	V	A	P	P	F	R	Q	V	D	F	Q	I	L	Y	G	Q	G	I	S	K	T	G	E	L	I	E	L	G	V	K	H	K	L	V	D	K	A	G	A	W	Y	A	Y	N	295			
NTDB id 1165	A1552VC	RS01565	WP 000344154.1	SVRLD	I	R	R	T	G	. . . .	A	I	.K	E	G	E	E	V	V	G	N	E	T	R	I	K	V	V	K	N	K	I	A	A	P	F	K	E	A	N	T	Q	I	M	Y	G	Q	G	F	N	R	E	G	E	L	I	D	L	G	V	K	H	K	M	V	E	K	S	G	A	W	Y	S	Y	N	293		
NTDB id 1142	GTF74	RS11550	WP 000344154.1	SVRLD	I	R	R	T	G	. . . .	A	I	.K	E	G	E	E	V	V	G	N	E	T	R	I	K	V	V	K	N	K	I	A	A	P	F	K	E	A	N	T	Q	I	M	Y	G	Q	G	F	N	R	E	G	E	L	I	D	L	G	V	K	H	K	M	V	E	K	S	G	A	W	Y	S	Y	N	293		

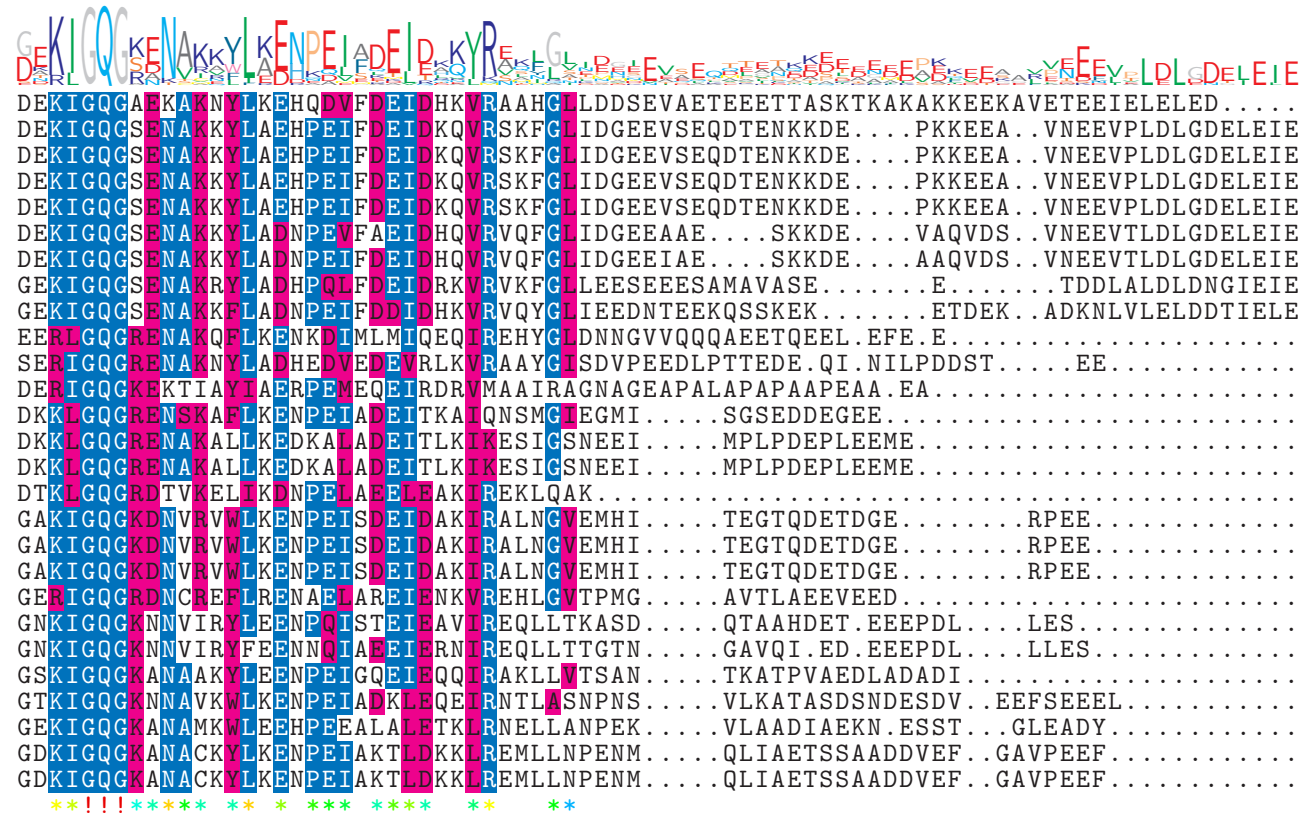
consensus

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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 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 1022 ACIAD RS06390 WP 004925639.1  
 NTDB id 1074 ABD1 RS10195 WP 000344167.1  
 NTDB id 1205 PSJM300 05545 AFN77183.1  
 NTDB id 1389 A4U84 RS07560 WP 021112712.1  
 NTDB id 117721 AW43 RS07565 WP 005724816.1  
 NTDB id 1165 A1552VC RS01565 WP 000344154.1  
 NTDB id 1142 GTF74 RS11550 WP 000344154.1  
 consensus






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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 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 1022 ACIAD RS06390 WP 004925639.1	...	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	...	349
NTDB id 1205 PSJM300 05545 AFN77183.1	...	347
NTDB id 1389 A4U84 RS07560 WP 021112712.1	...	372
NTDB id 117721 AW43 RS07565 WP 005724816.1	...	354
NTDB id 1165 A1552VC RS01565 WP 000344154.1	...	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	...	354

consensus

 non conserved  
 similar  
 ≥ 50% conserved