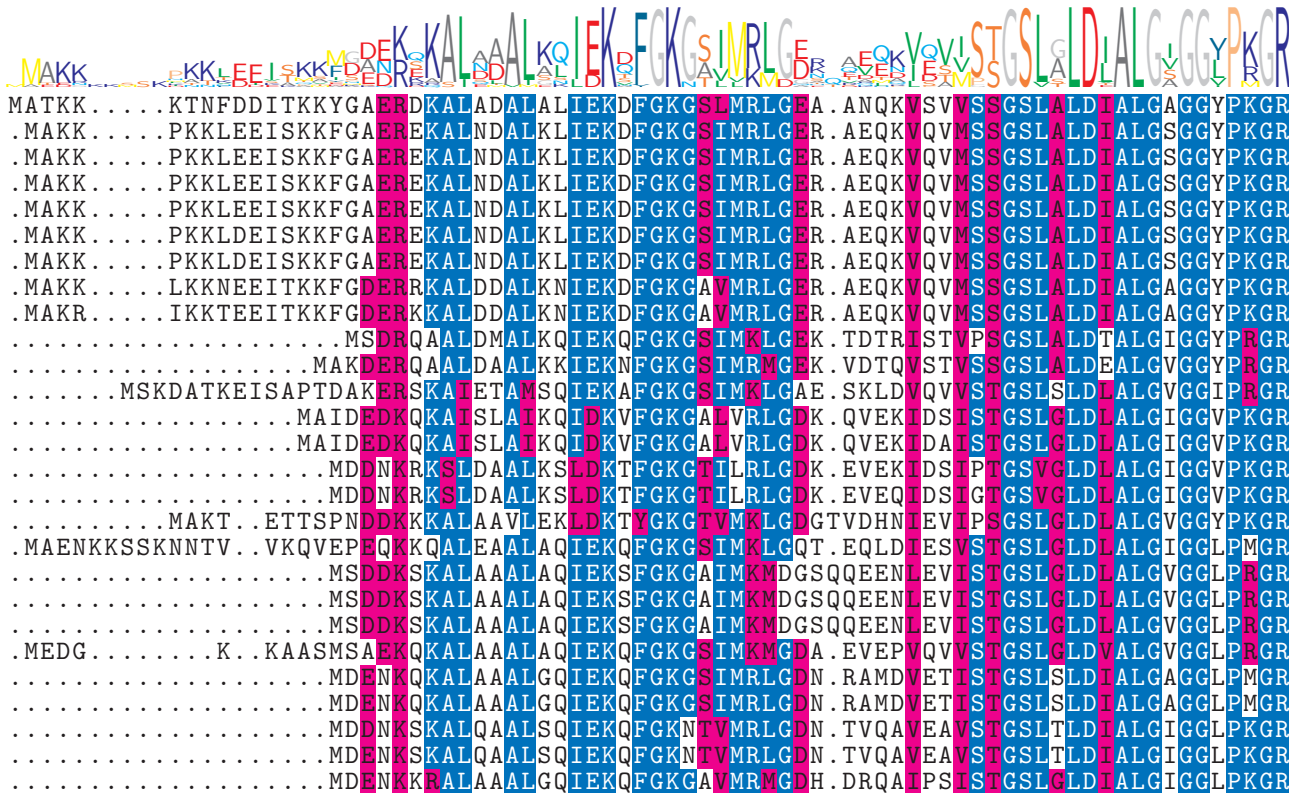


logo

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 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 1211 C694 RS00795 WP 000963128.1
 NTDB id 1214 NCTC11637 00359 SQJ03206.1
 NTDB id 1081369 CLC19156 RS00765 WP 039617275.1
 NTDB id 1245 Cj1673c YP 002345041.1
 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

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logo



NTDB id 600 KW2 RS01765 WP 011675413.1	VV	I	D	S	V	A	A	L	V	P	K	A	E	I	E	G	D	M	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	A	C	H	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	S	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	233		
NTDB id 269 KZH43 RS08665 WP 001085462.1	VV	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	M	R	K	L	G	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232			
NTDB id 228 SPD RS09265 WP 001085462.1	VV	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	M	R	K	L	G	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232			
NTDB id 194 SPR RS08825 WP 001085462.1	VV	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	M	R	K	L	G	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232			
NTDB id 159 SP RS09750 WP 001085462.1	VV	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	M	R	K	L	G	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232			
NTDB id 499 SM12261 RS08315 WP 078228268.1	VV	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	M	R	K	L	G	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232			
NTDB id 527 SMSK321 RS11065 WP 001085454.1	VV	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	M	R	K	L	G	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232			
NTDB id 453 Spy49 1753c ACI62003.1	VV	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	M	R	K	L	S	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232			
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NTDB id 115 BSU 16940 NP 389576.2	VV	V	D	S	V	A	A	L	V	P	K	A	E	I	E	G	D	M	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	S	G	A	I	N	K	S	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	S	217		
NTDB id 625 LCA RS02525 WP 011374196.1	L	V	V	D	S	V	A	A	L	V	P	R	A	E	I	E	G	E	M	G	D	A	H	V	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	S	G	T	I	N	K	T	K	T	I	A	L	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	V	T	P	G	G	R	A	L	K	F	Y	S	219	
NTDB id 1313 DR RS12030 WP 010888966.1	VV	V	D	S	V	A	A	L	T	P	R	A	E	I	E	G	D	M	G	D	S	L	P	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	T	A	I	L	S	K	T	G	T	A	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	Y	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	231		
NTDB id 1211 C694 RS00795 WP 000963128.1	VV	V	D	S	V	A	A	L	T	P	K	A	E	I	D	G	M	G	D	Q	H	V	G	L	Q	A	R	L	M	S	H	A	L	R	K	I	T	G	V	L	H	K	M	N	T	T	L	I	F	I	N	Q	L	R	M	K	I	G	M	G	Y	G	S	P	E	T	T	P	G	G	N	A	L	K	F	Y	A	221				
NTDB id 1214 NCTC11637 00359 SQJ03206.1	VV	V	D	S	V	A	A	L	T	P	K	A	E	I	D	G	M	G	D	Q	H	V	G	L	Q	A	R	L	M	S	H	A	L	R	K	I	T	G	V	L	H	K	M	N	T	T	L	I	F	I	N	Q	L	R	M	K	I	G	M	G	Y	G	S	P	E	T	T	P	G	G	N	A	L	K	F	Y	A	221				
NTDB id 1081369 CLC19156 RS00765 WP 039617275.1	I	V	V	D	S	V	A	A	L	T	P	K	A	E	I	E	G	D	M	G	D	Q	H	V	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	T	G	I	V	H	K	M	N	T	T	V	I	F	I	N	Q	L	R	M	K	I	G	M	G	Y	G	T	P	E	T	T	P	G	G	N	A	L	K	F	Y	A	219		
NTDB id 1245 Cj1673c YP 002345041.1	I	V	V	D	S	V	A	A	L	T	P	K	A	E	I	E	G	D	M	G	D	Q	H	V	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	T	G	I	V	H	K	M	N	T	T	V	I	F	I	N	Q	L	R	M	K	I	G	A	M	G	Y	G	T	P	E	T	T	P	G	G	N	A	L	K	F	Y	A	219	
NTDB id 1334 RA0C RS04870 WP 004918236.1	VV	V	D	S	V	A	A	L	T	P	K	A	E	I	D	G	M	G	D	S	K	M	G	L	H	A	R	L	M	S	Q	A	L	R	K	L	T	S	S	I	S	K	T	K	C	T	V	I	F	I	N	Q	L	R	D	K	I	G	V	M	.	F	G	S	P	E	T	T	P	G	G	N	A	L	K	F	Y	A	227			
NTDB id 1389 A4U84 RS07560 WP 021112712.1	I	I	V	D	S	V	A	A	L	T	P	K	A	E	I	E	G	D	M	G	D	S	H	M	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	T	A	N	I	K	N	T	N	C	L	V	V	I	F	I	N	Q	L	R	M	K	I	G	V	M	.	F	G	N	P	E	T	T	P	G	G	N	A	L	K	F	Y	A	235
NTDB id 1130 NGFG RS03960 WP 003688695.1	VV	V	D	S	V	A	A	L	V	P	K	A	E	I	E	G	D	M	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	T	G	H	I	K	T	N	T	L	V	V	I	F	I	N	Q	L	R	M	K	I	G	V	M	.	F	G	S	P	E	T	T	P	G	G	N	A	L	K	F	Y	S	219		
NTDB id 1124 NGFG RS03960 WP 003688695.1	VV	V	D	S	V	A	A	L	V	P	K	A	E	I	E	G	D	M	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	T	G	H	I	K	T	N	T	L	V	V	I	F	I	N	Q	L	R	M	K	I	G	V	M	.	F	G	S	P	E	T	T	P	G	G	N	A	L	K	F	Y	S	219		
NTDB id 1123 OK783 RS03845 WP 003688695.1	VV	V	D	S	V	A	A	L	V	P	K	A	E	I	E	G	D	M	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	T	G	H	I	K	T	N	T	L	V	V	I	F	I	N	Q	L	R	M	K	I	G	V	M	.	F	G	S	P	E	T	T	P	G	G	N	A	L	K	F	Y	S	219		
NTDB id 1427 RS RS02760 WP 011000510.1	I	V	I	D	S	V	A	A	L	V	P	K	A	E	I	E	G	E	M	G	D	A	L	P	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	T	G	T	I	K	R	T	N	C	L	V	I	F	I	N	Q	L	R	M	K	I	G	V	M	.	F	G	S	P	E	T	T	P	G	G	N	A	L	K	F	Y	A	227	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	I	V	V	D	S	V	A	A	L	T	P	K	A	E	I	E	G	E	M	G	D	S	H	M	G	L	Q	A	R	L	M	S	Q	A	M	R	K	L	T	G	N	L	K	Q	S	N	C	M	C	I	F	I	N	Q	L	R	M	K	I	G	V	M	.	F	G	N	P	E	T	T	P	G	G	N	A	L	K	F	Y	A	218	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	I	V	V	D	S	V	A	A	L	T	P	K	A	E	I	E	G	E	M	G	D	S	H	M	G	L	Q	A	R	L	M	S	Q	A	M	R	K	L	T	G	N	L	K	Q	S	N	C	M	C	I	F	I	N	Q	L	R	M	K	I	G	V	M	.	F	G	N	P	E	T	T	P	G	G	N	A	L	K	F	Y	A	218	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	I	V	V	D	S	V	A	A	L	T	P	K	A	E	I	E	G	E	M	G	D	S	H	M	G	L	Q	A	R	L	M	S	Q	A	L	R	K	I	T	G	N	A	K	R	S	N	C	M	V	I	F	I	N	Q	L	R	M	K	I	G	V	M	.	F	G	S	P	E	T	T	P	G	G	N	A	L	K	F	Y	A	218	
NTDB id 1074 ABD1 RS10195 WP 000344167.1	I	V	V	D	S	V	A	A	L	T	P	K	A	E	I	E	G	E	M	G	D	S	H	M	G	L	Q	A	R	L	M	S	Q	A	L	R	K	I	T	G	N	A	K	R	S	N	C	M	V	I	F	I	N	Q	L	R	M	K	I	G	V	M	.	F	G	S	P	E	T	T	P	G	G	N	A	L	K	F	Y	A	218	
NTDB id 1205 PSJM300 05545 AFN77183.1	I	I	V	D	S	V	A	A	L	V	P	K	A	E	I	E	G	E	M	G	D	A	H	V	G	L	Q	A	R	L	M	S	Q	A	L	R	K	I	T	G	N	I	K	N	A	N	C	L	V	I	F	I	N	Q	L	R	M	K	I	G	V	M	.	F	G	S	P	E	T	T	P	G	G	N	A	L	K	F	Y	A	218	
consensus	***	!	!	!	!																																																																													

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NTDB id 600	KW2	RS01765	WP 011675413.1	DEKIGQGA	EKA	KNYL	KEHQDV	FDEID	HKVRAAHG	LDDSEVAETE	EETTAS	KTKAKAK	KKEEKAV	ETEEIELE	ED	387				
NTDB id 269	KZH43	RS08665	WP 001085462.1	DEKIGQGS	ENAKKYL	AEHP	PEIFDEI	DKQVRSKF	GLIDGEEV	SEQDTENK	KDE	...PKKEA	..VNEEV	PLDLGDE	LEIE		385				
NTDB id 228	SPD	RS09265	WP 001085462.1	DEKIGQGS	ENAKKYL	AEHP	PEIFDEI	DKQVRSKF	GLIDGEEV	SEQDTENK	KDE	...PKKEA	..VNEEV	PLDLGDE	LEIE		385				
NTDB id 194	SPR	RS08825	WP 001085462.1	DEKIGQGS	ENAKKYL	AEHP	PEIFDEI	DKQVRSKF	GLIDGEEV	SEQDTENK	KDE	...PKKEA	..VNEEV	PLDLGDE	LEIE		385				
NTDB id 159	SP	RS09750	WP 001085462.1	DEKIGQGS	ENAKKYL	AEHP	PEIFDEI	DKQVRSKF	GLIDGEEV	SEQDTENK	KDE	...PKKEA	..VNEEV	PLDLGDE	LEIE		385				
NTDB id 499	SM12261	RS08315	WP 078228268.1	DEKIGQGS	ENAKKYL	ADNPEI	FDEIDH	QVVRVQF	GLIDGEEIA	ES	...KKDE	...AAQV	DS	..VNEEV	TLDLGD	LEIE	381				
NTDB id 527	SMSK321	RS11065	WP 001085454.1	DEKIGQGS	ENAKKYL	ADNPEI	FDEIDH	QVVRVQF	GLIDGEEIA	ES	...KKDE	...VAQV	DS	..VNEEV	TLDLGD	LEIE	381				
NTDB id 453	Spy49	1753c	ACI62003.1	GEKIGQGS	ENAKRYL	ADHPQL	FDEIDR	KVRVKF	GLLEESEES	AMAVASE	.....E	.....T	DDLALD	LDNGIE	IEIE		377		
NTDB id 408	SMU	RS09530	WP 002262392.1	GEKIGQGS	ENAKKFL	ADNPEI	FDDIDH	KVRVQY	GLIEEDNTE	EKQSSKEK	.....E	TDEK	..ADKNL	VLELDD	TIELE		382			
NTDB id 115	BSU	16940	NP 389576.2	EEELGGQ	RENAKQF	LKENKD	IMLMIQ	EQIREHY	GLDNNGVV	QQAEE	TQEEL	EFEEET	DDLALD	LDNGIE	IEIE	348			
NTDB id 625	LCA	RS02525	WP 011374196.1	SERIGQG	RENAKNYL	ADHEDV	EVRLK	VRAAYG	ISDVPEED	LPTTEDE	.QI	NILPDD	STET	DDLALD	LDNGIE	IEIE	355		
NTDB id 1313	DR	RS12030	WP 010888966.1	DERIGQG	KEKTIAY	AERPEM	EQEIRDR	VMAAIR	AGNAGEA	PALAPAPA	APAEAAEAET	DDLALD	LDNGIE	IEIE		363			
NTDB id 1211	C694	RS00795	WP 000963128.1	DKKLGQ	RENAKALL	KEDKAL	ADEITL	KIKESIG	SNEEI	MP	LPDE	PLEEMEET	DDLALD	LDNGIE	IEIE	347		
NTDB id 1214	NCTC11637	00359	SQJ03206.1	DKKLGQ	RENAKALL	KEDKAL	ADEITL	KIKESIG	SNEEI	MP	LPDE	PLEEMEET	DDLALD	LDNGIE	IEIE	347		
NTDB id 1081369	CLC19156	RS00765	WP 039617275.1	ASKLGGQ	RENAKAFL	KENPAT	ADEITQ	AIQNSIG	IDSMI	L	GAKED	DEEGEEET	DDLALD	LDNGIE	IEIE	345		
NTDB id 1245	Cj1673c	YP 002345041.1		DKKLGQ	RENSKAF	LKENPEI	ADEITK	AIQNSM	GIEGMI	S	GSED	DEGEEET	DDLALD	LDNGIE	IEIE	343		
NTDB id 1334	RA0C	RS04870	WP 004918236.1	DTKLGQ	GRDTVK	ELKDN	PELAE	LEAKI	REKLQAKET	DDLALD	LDNGIE	IEIE				343			
NTDB id 1389	A4U84	RS07560	WP 021112712.1	GTKIGQG	KNNAVK	WLKENPEI	ADKLE	QEIRNTL	ASNPS	V	LKAT	ASDSN	DES	SV	..EEF	SEELE	372		
NTDB id 1130	NGFG	RS03960	WP 003688695.1	GAKIGQG	KDNVRV	WLKENPEI	SDEID	AKIRAL	NGVEMHI	T	EGTQ	DET	DGERET	DDLALD	LDNGIE	IEIE	348	
NTDB id 1124	NGFG	RS03960	WP 003688695.1	GAKIGQG	KDNVRV	WLKENPEI	SDEID	AKIRAL	NGVEMHI	T	EGTQ	DET	DGERET	DDLALD	LDNGIE	IEIE	348	
NTDB id 1123	OK783	RS03845	WP 003688695.1	GAKIGQG	KDNVRV	WLKENPEI	SDEID	AKIRAL	NGVEMHI	T	EGTQ	DET	DGERET	DDLALD	LDNGIE	IEIE	348	
NTDB id 1427	RS	RS02760	WP 011000510.1	GERIGQG	RDNCRE	FLREN	AELARE	IENK	VREHLG	VTPMG	A	VTLA	EEVEEDET	DDLALD	LDNGIE	IEIE	352	
NTDB id 1165	A1552VC	RS01565	WP 000344154.1	GDKIGQG	KANACK	YLKENPEI	AKTLD	DKKLR	EMLLNP	ENM	QLIA	ETSSA	ADD	VEF	..G	A	VPEEFE	354	
NTDB id 1142	GTF74	RS11550	WP 000344154.1	GDKIGQG	KANACK	YLKENPEI	AKTLD	DKKLR	EMLLNP	ENM	QLIA	ETSSA	ADD	VEF	..G	A	VPEEFE	354	
NTDB id 1022	ACIAD	RS06390	WP 004925639.1	GNKIGQG	KNNVIR	YLEENP	QISTE	IEAVI	REQLLTK	ASD	Q	TAA	HDETEE	EPDL	..L	..ESE	349		
NTDB id 1074	ABD1	RS10195	WP 000344167.1	GNKIGQG	KNNVIR	YLEENP	QISTE	IEAVI	REQLLTK	ASD	Q	TAA	HDETEE	EPDL	..L	..ESE	349		
NTDB id 1205	PSJM300	05545	AFN77183.1	GSKIGQG	KANAACK	YLEENPEI	GGIEI	EQIRAK	LLV	TSAN	T	KATP	VAED	LADADIET	DDLALD	LDNGIE	IEIE	347

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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 499 SM12261 RS08315 WP 078228268.1	IEE	384
NTDB id 527 SMSK321 RS11065 WP 001085454.1	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 1211 C694 RS00795 WP 000963128.1	...	347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	...	347
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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
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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
 ≥ 50% conserved