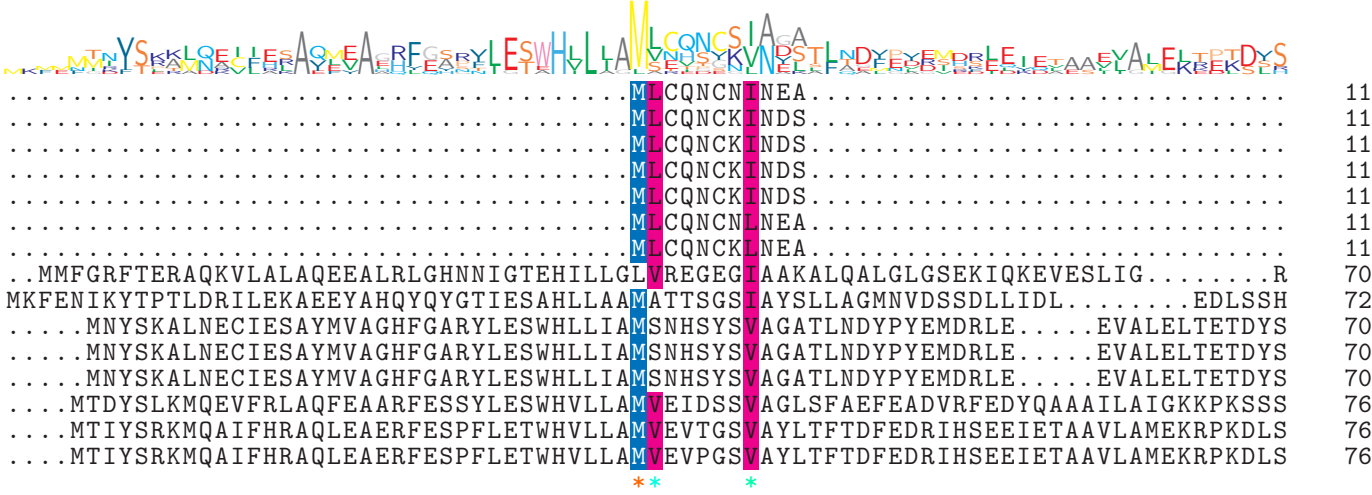


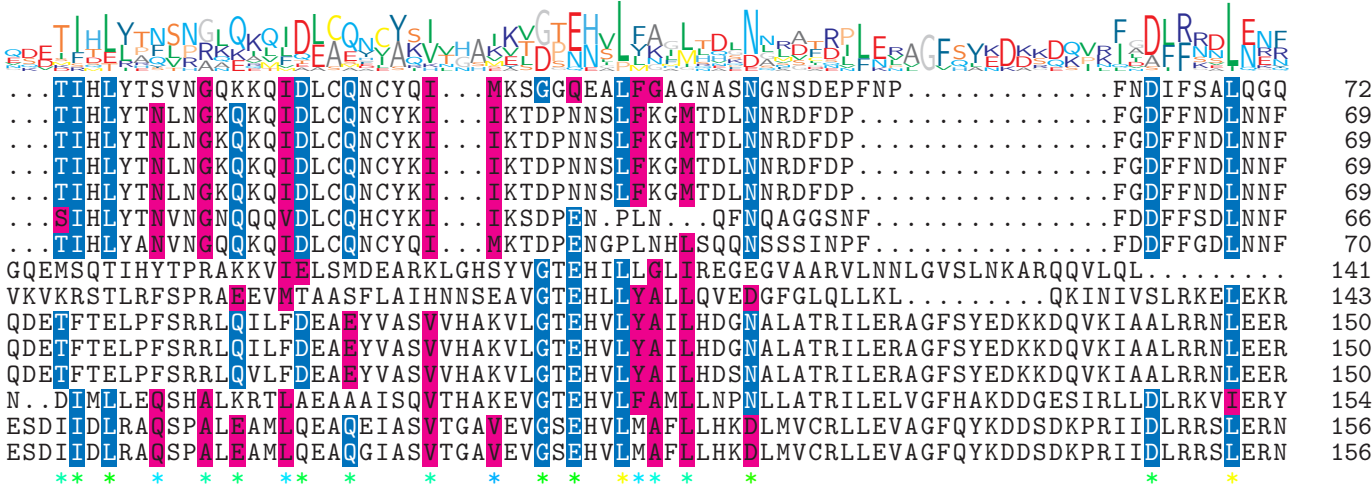
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NTDB id	601	KW2	RS02615	WP	021036805.1
NTDB id	281	KZH43	RS03550	WP	000882517.1
NTDB id	245	SPD	RS03860	WP	000882517.1
NTDB id	243	SPR	RS03635	WP	000882517.1
NTDB id	241	SP	RS04015	WP	000882523.1
NTDB id	260925	CR921	RS03175	WP	011225684.1
NTDB id	378	SMU	RS02690	WP	002263569.1
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	281	KZH43	RS03550	WP	000882517.1
NTDB id	245	SPD	RS03860	WP	000882517.1
NTDB id	243	SPR	RS03635	WP	000882517.1
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NTDB id	85	BSU	00860	NP	387967.1
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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	.DFNGAASNQ.....TPPTQTGCR.....GPRGPNPRAKQPKGML	EEFGIN	ITESARRGE	IDPVIGRDE	EIKRV	136
NTDB id 281 KZH43 RS03550 WP 000882517.1	RPSSN..TPP....IPPTQSGGGYGGNGGYGSQNRGSAQT	PPSSEKGLLEEFGIN	VTEIARRGD	IDPVIGRDE	EIRV	142
NTDB id 245 SPD RS03860 WP 000882517.1	RPSSN..TPP....IPPTQSGGGYGGNGGYGSQNRGSAQT	PPSSEKGLLEEFGIN	VTEIARRGD	IDPVIGRDE	EIRV	142
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NTDB id 260925 CR921 RS03175 WP 011225684.1	RSS.NGDLPN....TPPTQEGGNRNGGPG.G.RPGGPRQQAP	QQPQGLLEEFGIN	ITDIARRGD	IDPVIGRDE	EIRV	137
NTDB id 378 SMU RS02690 WP 002263569.1	RAFNNQDLPN....TPPTQAGGGNGNGGNNR..RPGGPQQQAS	KPNGLLEEFGIN	LTDIARKGE	IDPVIGRDE	EITRV	143
NTDB id 85 BSU 00860 NP 387967.1	LGSNET.....GSSAAGTNSNANTPTL	DSLARDL	TAIAKEDSL	DPVIGRSKEI	QRV	192
NTDB id 610 V4T04 RS10165 WP 012897346.1	TGLKVPESKKAVTPMSKRKMAK.....VAENSTTPTL	DSVSSDL	TEEARLGK	LDPMIGRE	AEIDRL	205
NTDB id 290 KZH43 RS10025 WP 001109677.1	AGWTREDLKA.LRQRHRTV.ADKQ.....NSMANMMGMP	QTPSGGLEDYTHD	LTEQARSGK	LEPVIGRDKE	ISRM	218
NTDB id 289 SPD RS10700 WP 001109677.1	AGWTREDLKA.LRQRHRTV.ADKQ.....NSMANMMGMP	QTPSGGLEDYTHD	LTEQARSGK	LEPVIGRDKE	ISRM	218
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NTDB id 377 SMU RS09275 WP 002262344.1	AGFSKEDIKA.IFEMRPKKVKNS.....SSFSDLMKPP.SVT	GELADFTRD	LTELARQGR	LEPVIGREQE	ISRM	222
NTDB id 297 STER RS00545 WP 011680614.1	AGLSKQDLKA.IHDLRKPKKSKAS.....ANFANMMQPP	QSSTGELADYTKD	LTALES	GNLDPVIGRDE	EISRM	225
NTDB id 329 STU RS10020 WP 011225298.1	AGLSKQDLKA.IHDLRKPKKSKAS.....ANFANMMQPP	QSSTGELADYTKD	LTALES	GNLDPVIGRDE	EISRM	225
consensus	* * *	* *	* * ! * * *	* ! * * * ! *	* * * ! * * ! * ! * ! * ! *	

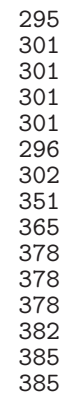
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NTDB id 243 SPR RS03635 WP 000882517.1	IEILNRRTKNNPVLIGEPGVGKTAVVEGLAQKIVDGDVPQKLQNK	EVIRL	DVVS	LVQGTG	IRGQFEERM	QKLMDE	IRKRE	222
NTDB id 241 SP RS04015 WP 000882523.1	IEILNRRTKNNPVLIGEPGVGKTAVVEGLAQKIVDGDVPQKLQNK	EVIRL	DVVS	LVQGTG	IRGQFEERM	QKLMDE	IRKRE	222
NTDB id 260925 CR921 RS03175 WP 011225684.1	IEILNRRTKNNPVLIGEPGVGKTAVVEGLAQKIVDGDVPQKLQNK	EVIRL	DVVS	LVQGTG	IRGQFEERM	QKLMDE	IRQRQ	217
NTDB id 378 SMU RS02690 WP 002263569.1	IEILNRRTKNNPVLIGEPGVGKTAVVEGLAQKIVDGDVPQKLQNK	EVIRL	DVVS	LVQGTG	IRGQFEERM	QKLMDE	IRQRQ	223
NTDB id 85 BSU 00860 NP 387967.1	IEVLSRRTKNNPVLIGEPGVGKTAVVEGLAQKIVDGDVPQKLQNK	EVIRL	DVVS	LVQGTG	IRGQFEERM	QKLMDE	IRQAG	272
NTDB id 610 V4T04 RS10165 WP 012897346.1	IHILSRRTKNNPVLIGEPGVGKTAVVEGLAQKIVDGDVPQKLQNK	EVIRL	DVVS	LVQGTG	IRGQFEERM	QKLMDE	IRQAG	272
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NTDB id 287 SP RS11210 WP 001109712.1	IQILSRRTKNNPVLIGEPGVGKTAVVEGLAQKIVDGDVPQKLQNK	EVIRL	DVVS	LVQGTG	IRGQFEERM	QKLMDE	IRQAG	272
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consensus	* * !	*****!	*!*	*!*	*!*	*****!	!!	!! *****

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NTDB id 601 KW2 RS02615 WP 021036805.1
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NTDB id 243 SPR RS03635 WP 000882517.1
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NTDB id 287 SP RS11210 WP 001109712.1
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NTDB id 329 STU RS10020 WP 011225298.1
consensus

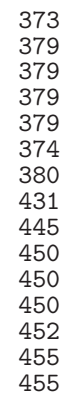
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NTDB id 378 SMU RS02690 WP 002263569.1
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NTDB id 289 SPD RS10700 WP 001109677.1
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NTDB id 329 STU RS10020 WP 011225298.1
consensus

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logo

NTDB	id	601	KW2	RS02615	WP	021036805.1	KAE	D	E	K	A	A	H	F	R	D	Q	I	A	K	Y	K	E	M	Q	K		Q	E	V	T	D	E	M	P	V	I	T	E	K	D	I	E	Q	I	V	E	Q	K	T	Q	I	P	V	G	D	L	K	E	K	E	Q	T	Q	L	I	N	L	A	D	L	K	A	H	V	I	447																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
NTDB	id	281	KZH43	RS03550	WP	000882517.1	R	E	D	E	K	A	A	Y	F	R	D	Q	I	A	K	Y	K	E	M	Q	K		K	K	I	T	D	Q	D	T	P	I	I	S	E	K	T	I	E	H	I	I	E	Q	K	T	N	I	P	V	G	D	L	K	E	K	E	Q	S	Q	L	I	H	L	A	E	D	L	K	S	H	V	I	453																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
NTDB	id	245	SPD	RS03860	WP	000882517.1	R	E	D	E	K	A	A	Y	F	R	D	Q	I	A	K	Y	K	E	M	Q	K		K	K	I	T	D	Q	D	T	P	I	I	S	E	K	T	I	E	H	I	I	E	Q	K	T	N	I	P	V	G	D	L	K	E	K	E	Q	S	Q	L	I	H	L	A	E	D	L	K	S	H	V	I	453																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
NTDB	id	243	SPR	RS03635	WP	000882517.1	R	E	D	E	K	A	A	Y	F	R	D	Q	I	A	K	Y	K	E	M	Q	K		K	K	I	T	D	Q	D	T	P	I	I	S	E	K	T	I	E	H	I	I	E	Q	K	T	N	I	P	V	G	D	L	K	E	K	E	Q	S	Q	L	I	H	L	A	E	D	L	K	S	H	V	I	453																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
NTDB	id	241	SP	RS04015	WP	000882523.1	R	E	D	E	K	A	A	Y	F	R	D	Q	I	A	K	Y	K	E	M	Q	K		K	K	I	T	D	Q	D	T	P	S	I	I	S	E	K	T	I	E	H	I	I	E	Q	K	T	N	I	P	V	G	D	L	K	E	K	E	Q	S	Q	L	I	H	L	A	E	D	L	K	S	H	V	I	453																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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NTDB	id	378	SMU	RS02690	WP	002263569.1	R	D	E	D	Y	E	K	A	A	Y	F	R	D	Q	I	A	K	Y	K	E	M	Q	S		A	K	L	D	K	E	N	T	P	V	I	T	E	K	N	I	E	V	I	V	E	Q	K	T	N	I	P	V	G	E	L	K	E	K	E	Q	S	Q	L	I	H	L	A	D	D	L	K	T	R	V	I	454																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
NTDB	id	85	BSU	00860	NP	387967.1	Q	S	Q	E	E	E	K	A	A	S	L	R	D	T	E	Q	R	L	R	E	Q	V	E	D	T	K	K	S	W	K	E	K	Q	Q	G	E	N	S	E	V	T	V	D	D	I	A	M	V	V	S	S	W	T	G	V	P	V	S	K	I	A	Q	T	E	T	D	K	L	N	M	E	N	I	L	H	S	R	V	I	511																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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NTDB	id	297	STER	RS00545	WP	011680614.1	I	S	C	D	I	G	A	A	V	K	Q	Y	K	A	N	Q		K		A	K	F	P	K	P	A	L	V	D	A	D	Q	I	M	Q	T	L	S	R	L	S	G	I	P	V	E	K	M	T	Q	T	D	S	K	R	Y	L	N	L	E	S	E	L	H	K	R	V	I	521																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
NTDB	id	329	STU	RS10020	WP	011225298.1	I	S	C	D	I	G	A	A	V	K	Q	Y	K	A	N	Q		K		A	K	F	P	K	P	A	L	V	D	A	D	Q	I	M	Q	T	L	S	R	L	S	G	I	P	V	E	K	M	T	Q	T	D	S	K	R	Y	L	N	L	E	S	E	L	H	K	R	V	I	521																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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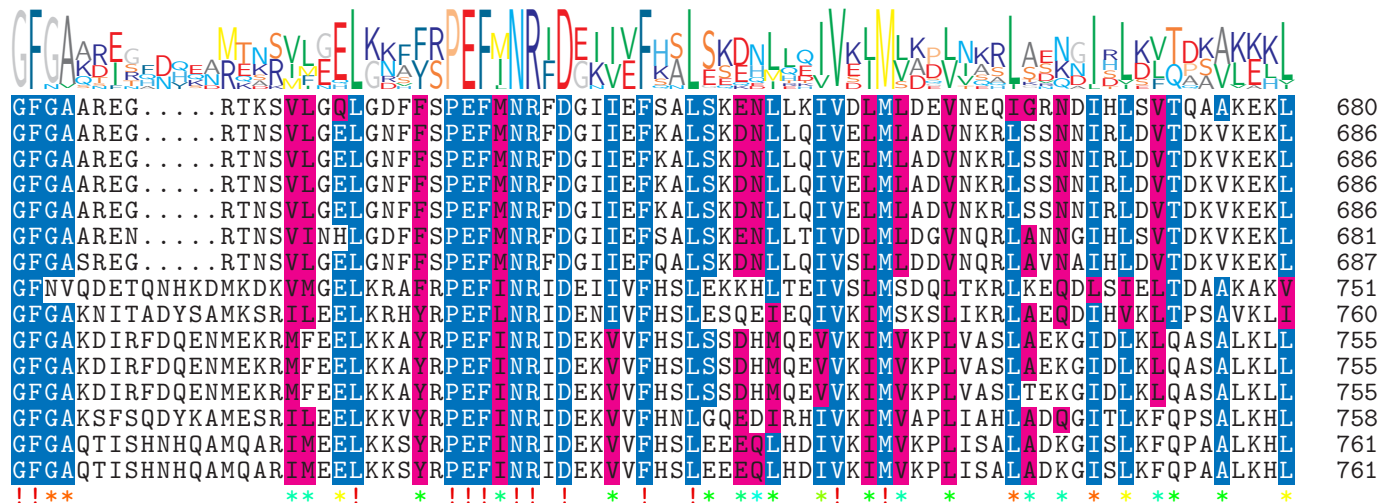
logo

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NTDB	id	281	KZH43	RS03550	WP	000882517.1	GQD	E	A	V	D	K	I	A	K	A	I	R	R	N	R	V	C	L	G	T	P	N	R	P	I	G	S	F	L	F	V	G	P	T	G	V	G	K	T	E	L	S	K	Q	L	A	E	L	F	G	S	A	D	S	M	I	R	F	D	M	S	E	Y	M	E	K	H	S	V	A	K	L	V	G	A	P		533																																																																																																																																																																																																																																																																																																																																																																																																																																										
NTDB	id	245	SPD	RS03860	WP	000882517.1	GQD	E	A	V	D	K	I	A	K	A	I	R	R	N	R	V	C	L	G	T	P	N	R	P	I	G	S	F	L	F	V	G	P	T	G	V	G	K	T	E	L	S	K	Q	L	A	E	L	F	G	S	A	D	S	M	I	R	F	D	M	S	E	Y	M	E	K	H	S	V	A	K	L	V	G	A	P		533																																																																																																																																																																																																																																																																																																																																																																																																																																										
NTDB	id	243	SPR	RS03635	WP	000882517.1	GQD	E	A	V	D	K	I	A	K	A	I	R	R	N	R	V	C	L	G	T	P	N	R	P	I	G	S	F	L	F	V	G	P	T	G	V	G	K	T	E	L	S	K	Q	L	A	E	L	F	G	S	A	D	S	M	I	R	F	D	M	S	E	Y	M	E	K	H	S	V	A	K	L	V	G	A	P		533																																																																																																																																																																																																																																																																																																																																																																																																																																										
NTDB	id	241	SP	RS04015	WP	000882523.1	GQD	E	A	V	D	K	I	A	K	A	I	R	R	N	R	V	C	L	G	T	P	N	R	P	I	G	S	F	L	F	V	G	P	T	G	V	G	K	T	E	L	S	K	Q	L	A	E	L	F	G	S	A	D	S	M	I	R	F	D	M	S	E	Y	M	E	K	H	S	V	A	K	L	V	G	A	P		533																																																																																																																																																																																																																																																																																																																																																																																																																																										
NTDB	id	260925	CR921	RS03175	WP	011225684.1	GQD	E	A	V	D	K	I	A	K	A	I	R	R	N	R	V	C	L	G	A	P	N	R	P	I	G	S	F	L	F	V	G	P	T	G	V	G	K	T	E	L	S	K	Q	L	A	E	L	F	G	S	S	D	S	M	I	R	F	D	M	S	E	Y	M	E	K	H	A	V	A	K	L	V	G	A	P		528																																																																																																																																																																																																																																																																																																																																																																																																																																										
NTDB	id	378	SMU	RS02690	WP	002263569.1	GQD	E	A	V	D	K	I	A	K	A	I	R	R	N	R	V	C	L	G	T	P	N	R	P	I	G	S	F	L	F	V	G	P	T	G	V	G	K	T	E	L	S	K	Q	L	A	E	L	F	G	S	E	D	S	M	I	R	F	D	M	S	E	Y	M	E	K	H	A	V	A	K	L	V	G	A	P		534																																																																																																																																																																																																																																																																																																																																																																																																																																										
NTDB	id	85	BSU	00860	NP	387967.1	GQD	E	A	V	V	A	V	A	K	A	V	R	R	A	R	A	C	L	K	D	P	K	R	P	I	G	S	F	I	F	L	G	P	T	G	V	G	K	T	E	L	A	R	A	L	A	E	S	I	F	G	D	E	S	M	I	R	I	D	M	S	E	Y	M	E	K	H	S	T	S	R	L	V	G	S	P		591																																																																																																																																																																																																																																																																																																																																																																																																																																										
NTDB	id	610	V4T04	RS10165	WP	012897346.1	GQ	E	E	A	T	S	A	V	S	R	A	I	R	R	A	R	S	G	V	A	D	S	R	P	M	G	S	F	M	F	L	G	P	T	G	V	G	K	T	E	L	A	K	A	L	A	D	S	V	F	G	S	E	D	N	M	I	R	V	D	M	S	E	F	M	E	K	H	S	T	S	R	L	I	G	A	P		600																																																																																																																																																																																																																																																																																																																																																																																																																																									
NTDB	id	290	KZH43	RS10025	WP	001109677.1	GQD	Q	A	V	S	S	I	S	R	A	I	R	R	N	Q	S	G	I	R	S	H	K	R	P	I	G	S	F	M	F	L	G	P	T	G	V	G	K	T	E	L	A	K	A	L	A	E	V	L	F	D	D	E	S	A	L	I	R	F	D	M	S	E	Y	M	E	K	F	A	A	S	R	L	N	G	A	P		595																																																																																																																																																																																																																																																																																																																																																																																																																																									
NTDB	id	289	SPD	RS10700	WP	001109677.1	GQD	Q	A	V	S	S	I	S	R	A	I	R	R	N	Q	S	G	I	R	S	H	K	R	P	I	G	S	F	M	F	L	G	P	T	G	V	G	K	T	E	L	A	K	A	L	A	E	V	L	F	D	D	E	S	A	L	I	R	F	D	M	S	E	Y	M	E	K	F	A	A	S	R	L	N	G	A	P		595																																																																																																																																																																																																																																																																																																																																																																																																																																									
NTDB	id	287	SP	RS11210	WP	001109712.1	GQD	Q	A	V	S	S	I	S	R	A	I	R	R	N	Q	S	G	I	R	S	H	K	R	P	I	G	S	F	M	F	L	G	P	T	G	V	G	K	T	E	L	A	K	A	L	A	E	V	L	F	D	D	E	S	A	L	I	R	F	D	M	S	E	Y	M	E	K	F	A	A	S	R	L	N	G	A	P		595																																																																																																																																																																																																																																																																																																																																																																																																																																									
NTDB	id	377	SMU	RS09275	WP	002262344.1	GQD	Q	A	V	S	S	I	S	R	A	I	R	R	N	Q	S	G	I	R	V	G	K	R	P	I	G	S	F	M	F	L	G	P	T	G	V	G	K	T	E	L	A	K	A	L	A	E	V	L	F	D	D	E	S	A	L	I	R	F	D	M	S	E	Y	M	E	K	F	A	A	S	R	L	N	G	A	P		598																																																																																																																																																																																																																																																																																																																																																																																																																																									
NTDB	id	297	STER	RS00545	WP	011680614.1	GQD	E	A	V	S	A	I	S	R	A	I	R	R	N	Q	S	G	I	R	T	G	K	R	P	I	G	S	F	M	F	L	G	P	T	G	V	G	K	T	E	L	A	K	A	L	A	E	V	L	F	D	D	E	S	A	L	L	R	F	D	M	S	E	Y	M	E	K	F	A	A	S	R	L	N	G	A	P		601																																																																																																																																																																																																																																																																																																																																																																																																																																									
NTDB	id	329	STU	RS10020	WP	011225298.1	GQD	E	A	V	S	A	I	S	R	A	I	R	R	N	Q	S	G	I	R	T	G	K	R	P	I	G	S	F	M	F	L	G	P	T	G	V	G	K	T	E	L	A	K	A	L	A	E	V	L	F	D	D	E	S	A	L	L	R	F	D	M	S	E	Y	M	E	K	F	A	A	S	R	L	N	G	A	P		601																																																																																																																																																																																																																																																																																																																																																																																																																																									
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NTDB id 601 KW2 RS02615 WP 021036805.1
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 241 SP RS04015 WP 000882523.1
NTDB id 260925 CR921 RS03175 WP 011225684.1
NTDB id 378 SMU RS02690 WP 002263569.1
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

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NTDB	id	601	KW2	RS02615	WP	021036805.1	V	D	L	G	Y	N	P	A	M	G	A	R	P	L	R	R	T	I	Q	E	N	I	E	D	S	I	A	D	F	Y	I	E	H	P	E	Y	K	Q	L	.	V	A	D	L	I	D	D	K	I	V	I	S	N	Q	T	Q	E	T	A	E	T	T	D	E	.	E	V	P	A	E	..	748		
NTDB	id	281	KZH43	RS03550	WP	000882517.1	V	D	L	G	Y	D	P	K	M	G	A	R	P	L	R	R	T	I	Q	D	Y	I	E	D	T	I	T	D	Y	L	E	N	P	S	E	K	D	L	.	K	A	V	M	T	S	K	G	N	I	Q	I	K	S	A	K	K	A	E	V	K	S	S	E	K	E	K		752						
NTDB	id	245	SPD	RS03860	WP	000882517.1	V	D	L	G	Y	D	P	K	M	G	A	R	P	L	R	R	T	I	Q	D	Y	I	E	D	T	I	T	D	Y	L	E	N	P	S	E	K	D	L	.	K	A	V	M	T	S	K	G	N	I	Q	I	K	S	A	K	K	A	E	V	K	S	S	E	K	E	K		752						
NTDB	id	243	SPR	RS03635	WP	000882517.1	V	D	L	G	Y	D	P	K	M	G	A	R	P	L	R	R	T	I	Q	D	Y	I	E	D	T	I	T	D	Y	L	E	N	P	S	E	K	D	L	.	K	A	V	M	T	S	K	G	N	I	Q	I	K	S	A	K	K	A	E	V	K	S	S	E	K	E	K		752						
NTDB	id	241	SP	RS04015	WP	000882523.1	V	D	L	G	Y	D	P	K	M	G	A	R	P	L	R	R	T	I	Q	D	Y	I	E	D	T	I	T	D	Y	L	E	N	P	S	E	K	D	L	.	K	A	V	M	T	S	K	G	N	I	Q	I	K	S	A	K	K	A	E	V	K	S	S	E	K	E	K		752						
NTDB	id	260925	CR921	RS03175	WP	011225684.1	V	D	L	G	Y	D	P	K	M	G	A	R	P	L	R	R	T	I	Q	D	H	I	E	D	A	I	T	D	F	Y	L	K	N	P	N	E	K	D	L	.	K	A	V	M	T	S	K	G	H	I	T	I	K	S	A	K	K	T	E	K	T	S	Q	K	T	E	A	L	K	E	V	N		752
NTDB	id	378	SMU	RS02690	WP	002263569.1	V	D	L	G	Y	D	P	K	M	G	A	R	P	L	R	R	T	I	Q	E	H	I	E	D	A	I	T	D	F	Y	L	E	H	P	E	Q	K	E	L	.	K	A	I	M	T	S	N	G	K	I	V	I	K	A	S	N	K	V	E	T	V	T	K	A	T	S	D		753					
NTDB	id	85	BSU	00860	NP	387967.1	A	E	E	G	V	D	L	E	Y	G	A	R	P	L	R	R	A	I	Q	K	H	V	E	D	R	L	S	E	E	L	R	G	N	I	H	K	G	Q	H	.	I	V	L	D	V	E	D	G	E	F	V	V	K	T	T	A	K	T	N		810													
NTDB	id	610	V4T04	RS10165	WP	012897346.1	A	E	V	G	F	D	P	E	Y	G	A	R	P	L	R	K	A	L	Q	K	E	V	E	D	L	S	E	Q	L	S	G	E	I	K	A	G	N	H	V	S	I	G	A	S	N	K	K	I	K	I	A	Q	I	V		816																		
NTDB	id	290	KZH43	RS10025	WP	001109677.1	A	N	Q	G	Y	D	P	E	M	G	A	R	P	L	R	R	T	L	Q	T	E	V	E	D	K	L	A	E	L	L	K	G	D	L	V	A	G	S	I	L	K	I	G	V	K	A	G	Q	L	K	F	D	I	A		810																		
NTDB	id	289	SPD	RS107																																																																												

	non conserved
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	$\geq 50\%$ conserved