

logo



NTDB id 600 KW2 RS01765 WP 011675413.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	V	A	L	H	A	V	A	A	V	Q	K	E	G	G	I	A	A	F	I	D	A	E	N	A	L	D	P	E	Y	A	K	A	L	G	V	M	I	D	E	L	L	S	Q	P	D	Y	G	E	Q	L	I	A	E	K	L	I	T	S	G	A	V	D	L			
NTDB id 269 KZH43 RS08665 WP 001085462.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	V	A	L	H	A	V	A	Q	A	Q	K	E	G	G	I	A	A	F	I	D	A	E	H	A	L	D	P	A	Y	A	A	L	G	V	M	I	D	E	L	L	S	Q	P	D	S	G	E	Q	L	E	I	A	G	K	L	I	D	S	G	A	V	D	L			
NTDB id 228 SPD RS09265 WP 001085462.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	V	A	L	H	A	V	A	Q	A	Q	K	E	G	G	I	A	A	F	I	D	A	E	H	A	L	D	P	A	Y	A	A	L	G	V	M	I	D	E	L	L	S	Q	P	D	S	G	E	Q	L	E	I	A	G	K	L	I	D	S	G	A	V	D	L			
NTDB id 194 SPR RS08825 WP 001085462.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	V	A	L	H	A	V	A	Q	A	Q	K	E	G	G	I	A	A	F	I	D	A	E	H	A	L	D	P	A	Y	A	A	L	G	V	M	I	D	E	L	L	S	Q	P	D	S	G	E	Q	L	E	I	A	G	K	L	I	D	S	G	A	V	D	L			
NTDB id 159 SP RS09750 WP 001085462.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	V	A	L	H	A	V	A	Q	A	Q	K	E	G	G	I	A	A	F	I	D	A	E	H	A	L	D	P	A	Y	A	A	L	G	V	M	I	D	E	L	L	S	Q	P	D	S	G	E	Q	L	E	I	A	G	K	L	I	D	S	G	A	V	D	L			
NTDB id 527 SMSK321 RS11065 WP 001085454.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	V	A	L	H	A	V	A	Q	A	Q	K	E	G	G	I	A	A	F	I	D	A	E	H	A	L	D	P	A	Y	A	A	L	G	V	M	I	D	E	L	L	S	Q	P	D	S	G	E	Q	L	E	I	A	G	K	L	I	D	S	G	A	V	D	L			
NTDB id 499 SM12261 RS08315 WP 078228268.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	V	A	L	H	A	V	A	Q	A	Q	K	E	G	G	I	A	A	F	I	D	A	E	H	A	L	D	P	A	Y	A	A	L	G	V	M	I	D	E	L	L	S	Q	P	D	S	G	E	Q	L	E	I	A	G	K	L	I	D	S	G	A	V	D	L			
NTDB id 408 SMU RS09530 WP 002262392.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	V	A	L	H	A	V	A	Q	A	Q	K	D	G	G	I	A	A	F	I	D	A	E	H	A	L	D	P	A	Y	A	A	L	G	V	M	I	D	E	L	L	S	Q	P	D	S	G	E	Q	L	E	I	A	G	K	L	I	D	S	G	A	V	D	L			
NTDB id 453 Spy49 1753c ACI62003.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	V	A	L	H	A	V	A	Q	A	Q	K	E	G	G	I	A	A	F	I	D	A	E	H	A	L	D	P	A	Y	A	A	L	G	V	M	I	D	E	L	L	A	Q	P	D	S	G	E	Q	L	E	I	A	G	K	L	I	D	S	G	A	V	D	L			
NTDB id 625 LCA RS02525 WP 011374196.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	V	A	L	H	A	V	A	E	V	Q	K	Q	G	G	T	A	A	Y	I	D	A	E	N	A	M	D	P	K	Y	A	T	A	L	G	V	M	I	D	D	L	L	S	Q	P	D	T	G	E	Q	L	E	I	A	D	A	L	V	S	S	G	A	V	D	L		
NTDB id 174360 BaDB11 RS21985 WP 003181926.1	I	V	E	V	Y	G	P	E	S	S	G	K	T	T	V	A	L	H	A	I	A	E	V	Q	Q	Q	G	G	Q	A	A	F	I	D	A	E	H	A	L	D	P	V	Y	A	Q	K	L	G	V	M	I	D	E	L	L	S	Q	P	D	T	G	E	Q	A	L	E	I	A	E	A	L	V	R	S	G	A	V	D	L	
NTDB id 115 BSU 16940 NP 389576.2	I	V	E	V	Y	G	P	E	S	S	G	K	T	T	V	A	L	H	A	I	A	E	V	Q	Q	Q	G	G	Q	A	A	F	I	D	A	E	H	A	L	D	P	V	Y	A	Q	K	L	G	V	M	I	D	E	L	L	S	Q	P	D	T	G	E	Q	A	L	E	I	A	E	A	L	V	R	S	G	A	V	D	L	
NTDB id 1313 DR RS12030 WP 010888966.1	I	T	E	I	Y	G	P	E	S	G	K	T	T	L	A	L	A	I	V	A	Q	A	Q	K	A	G	G	T	C	A	F	I	D	A	E	H	A	L	D	P	V	Y	A	R	A	L	G	V	M	I	D	E	L	L	V	S	Q	P	D	N	G	E	Q	A	L	E	I	M	E	L	L	V	R	S	G	A	T	D	V	
NTDB id 1245 Cj1673c YP 002345041.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	L	T	L	H	I	I	A	E	C	Q	K	A	G	G	V	C	A	F	I	D	A	E	H	A	L	D	V	K	Y	A	K	N	L	G	V	M	I	D	D	L	Y	S	Q	P	D	F	G	E	Q	A	L	E	I	V	E	T	I	A	R	S	G	A	V	D	L	
NTDB id 1211 C694 RS00795 WP 000963128.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	L	S	L	H	I	I	A	E	C	Q	K	N	G	G	V	C	A	F	I	D	A	E	H	A	L	D	V	H	Y	A	K	R	L	G	V	D	T	E	N	L	L	V	S	Q	P	D	T	G	E	Q	A	L	E	I	L	E	T	I	T	R	S	G	G	I	D	L
NTDB id 1214 NCTC11637 00359 SQJ03206.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	L	S	L	H	I	I	A	E	C	Q	K	N	G	G	V	C	A	F	I	D	A	E	H	A	L	D	V	H	Y	A	K	R	L	G	V	D	T	E	N	L	L	V	S	Q	P	D	T	G	E	Q	A	L	E	I	L	E	T	I	T	R	S	G	G	I	D	L
NTDB id 1334 RA0C RS04870 WP 004918236.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	L	T	L	H	A	I	A	E	A	Q	K	V	G	G	T	A	A	F	I	D	A	E	H	A	F	D	M	H	Y	A	E	K	L	C	T	N	L	E	L	I	V	S	Q	P	D	N	G	E	Q	A	L	E	I	A	D	S	L	I	R	S	G	V	D	L		
NTDB id 1389 A4U84 RS07560 WP 021112712.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	L	T	L	S	L	I	A	Q	A	Q	K	G	N	K	T	C	A	F	I	D	A	E	H	A	L	D	P	V	Y	A	R	N	L	G	V	M	I	D	E	L	L	S	Q	P	D	N	G	E	Q	A	L	E	I	C	D	A	L	V	R	S	G	A	V	D	V	
NTDB id 1130 NGFG RS03960 WP 003688695.1	I	V	E	I	F	G	P	E	S	S	G	K	T	T	L	C	L	E	A	V	A	Q	C	Q	K	N	G	G	V	C	A	F	V	D	A	E	H	A	F	D	P	V	Y	A	R	K	L	G	V	K	V	E	L	Y	L	S	Q	P	D	T	G	E	Q	A	L	E	I	C	D	T	L	V	R	S	G	G	I	D	M	
NTDB id 1124 NGFG RS03960 WP 003688695.1	I	V	E	I	F	G	P	E	S	S	G	K	T	T	L	C	L	E	A	V	A	Q	C	Q	K	N	G	G	V	C	A	F	V	D	A	E	H	A	F	D	P	V	Y	A	R	K	L	G	V	K	V	E	L	Y	L	S	Q	P	D	T	G	E	Q	A	L	E	I	C	D	T	L	V	R	S	G	G	I	D	M	
NTDB id 1123 OK783 RS03845 WP 003688695.1	I	V	E	I	F	G	P	E	S	S	G	K	T	T	L	C	L	E	A	V	A	Q	C	Q	K	N	G	G	V	C	A	F	V	D	A	E	H	A	F	D	P	V	Y	A	R	K	L	G	V	K	V	E	L	Y	L	S	Q	P	D	T	G	E	Q	A	L	E	I	C	D	T	L	V	R	S	G	G	I	D	M	
NTDB id 1427 RS RS02760 WP 011000510.1	V	V	E	I	Y	G	P	E	S	S	G	K	T	T	L	T	L	Q	V	A	E	M	Q	K	L	G	G	T	C	A	F	I	D	A	E	H	A	L	D	V	T	Y	A	D	K	L	G	V	K	V	P	D	L	L	S	Q	P	D	T	G	E	Q	A	L	E	I	A	D	A	L	V	R	S	G	V	D	L			
NTDB id 1165 A1552VC RS01565 WP 000344154.1	I	V	E	I	F	G	P	E	S	S	G	K	T	T	L	T	L	E	L	I	A	A	A	Q	R	E	G	K	T	C	A	F	I	D	A	E	H	A	L	D	P	V	Y	A	K	K	L	G	V	M	I	D	E	L	L	V	S	Q	P	D	T	G	E	Q	A	L	E	I	C	D	A	L	A	R	S	G	A	V	D	V
NTDB id 1142 GTF74 RS11550 WP 000344154.1	I	V	E	I	F	G	P	E	S	S	G	K	T	T	L	T	L	E	L	I	A	A	A	Q	R	E	G	K	T	C	A	F	I	D	A	E	H	A	L	D	P	V	Y	A	K	K	L	G	V	M	I	D	E	L	L	V	S	Q	P	D	T	G	E	Q	A	L	E	I	C	D	A	L	A	R	S	G	A	V	D	V
NTDB id 1074 ABD1 RS10195 WP 000344167.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	M	T	L	Q	A	I	A	Q	C	Q	K	S	G	G	T	C	A	F	I	D	A	E	H	A	L	D	P	Q	Y	A	R	K	L	G	V	D	I	D	N	L	L	V	S	Q	P	D	N	G	E	Q	A	L	E	I	A	D	M	L	V	R	S	G	A	T	D	L
NTDB id 1022 ACIAD RS06390 WP 004925639.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	M	T	L	Q	A	I	A	Q	C	Q	K	A	G	G	T	C	A	F	I	D	A	E	H	A	L	D	P	Q	Y	A	R	K	L	G	V	D	I	D	N	L	L	V	S	Q	P	D	H	G	E	Q	A	L	E	I	A	D	M	L	V	R	S	G	A	T	D	L
NTDB id 1205 PSJM300 05545 AFN77183.1	I	V	E	I	Y	G	P	E	S	S	G	K	T	T	L	T	L	S	V	I	A	A	A	Q	R	M	G	S	T	C	A	F	V	D	A	E	H	A	L	D	P	D	Y	A	G	K	L	G	V	N	V	D	D	L	L	V	S	Q	P	D	T	G	E	Q	A	L	E	I	T	D	M	L	V	R	S	N	A	V	D	L
consensus	*	*	!	*	*	!	!	!	!	!	!	!	!	!	*</																																																																	

logo



NTDB id 600 KW2 RS01765 WP 011675413.1	DEKIGQQA	EKAKNYL	KEHQDV	FDEID	HKVRAAH	GLDDSEVA	EETEEETT	ASKTKAKAK	KEEKAVETEE	IIELELED	. . . . .	387	
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYL	AEHP	EIFDEID	KQVRSKF	GLDGE	EVS	EQD	TENKKDE	. . . . .	PKKEEA	. . VNEEVPLDLGDELEIE	385
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYL	AEHP	EIFDEID	KQVRSKF	GLDGE	EVS	EQD	TENKKDE	. . . . .	PKKEEA	. . VNEEVPLDLGDELEIE	385
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYL	AEHP	EIFDEID	KQVRSKF	GLDGE	EVS	EQD	TENKKDE	. . . . .	PKKEEA	. . VNEEVPLDLGDELEIE	385
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYL	AEHP	EIFDEID	KQVRSKF	GLDGE	EVS	EQD	TENKKDE	. . . . .	PKKEEA	. . VNEEVPLDLGDELEIE	385
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYL	ADNPE	VFAEID	HQVRVQF	GLDGE	EAAE	. . . . .	SKKDE	. . . . .	VAQVDS	. . VNEEVTLDLGDELEIE	381
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYL	ADNPE	VFAEID	HQVRVQF	GLDGE	EIAE	. . . . .	SKKDE	. . . . .	AAQVDS	. . VNEEVTLDLGDELEIE	381
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFL	ADNPE	IFDD	HKVVRVQY	GLIED	NTEEK	QSSKEK	. . . . .	ETDEK	. . . . .	ADKNLVLELDDTIELE	382
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYL	ADHP	QIFDEID	RKVRVKF	GLLEE	SEES	SAMAVASE	. . . . .	E	. . . . .	TDDLALDLNGIEIE	377
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQGR	ENAKNYL	ADHED	VEDEV	RLKVR	AAAY	CTSDV	PEEDLPTTE	. . . . .	DEQI	. . . . .	NILPDDSTEE	355
NTDB id 174360 BaDB11 RS21985 WP 003181926.1	EERLIGQG	RENAKQFL	KENKD	ILLMI	QEQIREHY	GLDTG	GAAPA	QEDEAQAQEEL	. . . . .	EF	. . . . .		348
NTDB id 115 BSU 16940 NP 389576.2	EERLIGQG	RENAKQFL	KENKD	IMLMI	QEQIREHY	GLD	NGV	VVQQAEET	. . . . .	QEEL	. . . . .	EFEE	348
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQGK	EKTIA	YIAER	PEMEQE	IRDRV	MAA	TRAGN	AGEAPALAPAPAAPEAAEA	. . . . .		. . . . .		363
NTDB id 1245 Cj1673c YP 002345041.1	DKKIGQGR	ENAKAL	LKED	KALADE	ITLKI	KESI	CSNEEI	. . . . .	MPLPDEP	. . . . .	LEEME	. . . . .	343
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKIGQGR	ENAKAL	LKED	KALADE	ITLKI	KESI	CSNEEI	. . . . .	MPLPDEP	. . . . .	LEEME	. . . . .	347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKIGQGR	ENAKAL	LKED	KALADE	ITLKI	KESI	CSNEEI	. . . . .	MPLPDEP	. . . . .	LEEME	. . . . .	347
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKIGQGR	DTVKEL	TKDN	PEIAE	ELAKI	REKLQAK	. . . . .						343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQGN	NAVVK	LKEN	PEIAD	KLQEI	RNTLA	SNPNS	. . . . .	VLKATASDSN	DESD	. . . . .	VEEFSEEL	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQGD	NVRV	LKEN	PEIS	DEID	AKTRALN	CVEMHI	. . . . .	TEGTQDET	. . . . .	GERPEE	. . . . .	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQGD	NVRV	LKEN	PEIS	DEID	AKTRALN	CVEMHI	. . . . .	TEGTQDET	. . . . .	GERPEE	. . . . .	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQGD	NVRV	LKEN	PEIS	DEID	AKTRALN	CVEMHI	. . . . .	TEGTQDET	. . . . .	GERPEE	. . . . .	348
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQGR	DNCRE	FLREN	AELARE	LENK	VREHL	CVTPMG	. . . . .	AV	. . . . .	TLAEEVEED	. . . . .	352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQGN	ANACKYL	LKEN	PEIAKT	LDKKL	REMLLN	PNENM	. . . . .	QLIAETSSA	AADDVE	. . . . .	FGAVPEEF	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQGN	ANACKYL	LKEN	PEIAKT	LDKKL	REMLLN	PNENM	. . . . .	QLIAETSSA	AADDVE	. . . . .	FGAVPEEF	354
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQGN	NVIRY	FEEN	QIAE	EIER	NIRE	QLLTGTN	. . . . .	GAVQ	. . . . .	I	. . . . .	349
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQGN	NVIRY	LEEN	PGISTE	IEAVI	REQLL	TKASD	. . . . .	QTAA	. . . . .	HDETEEEP	. . . . .	349
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQGN	ANA	AKYL	LEEN	PEIGQE	IEQQI	RAKLL	VTSAN	. . . . .	TKATPVAED	LADAD	. . . . .	347
consensus	**!!!	*****	**	*****	*****	**	**	**					

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 527 SMSK321 RS11065 WP 001085454.1 IEE 384
NTDB id 499 SM12261 RS08315 WP 078228268.1 IEE 384
NTDB id 408 SMU RS09530 WP 002262392.1 D.. 383
NTDB id 453 Spy49 1753c ACI62003.1 D.. 378
NTDB id 625 LCA RS02525 WP 011374196.1 ... 355
NTDB id 174360 BaDB11 RS21985 WP 003181926.1 ... 348
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 1211 C694 RS00795 WP 000963128.1 ... 347
NTDB id 1214 NCTC11637 00359 SQJ03206.1 ... 347
NTDB id 1334 RAOC 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 1074 ABD1 RS10195 WP 000344167.1 ... 349
NTDB id 1022 ACIAD RS06390 WP 004925639.1 ... 349
NTDB id 1205 PSJM300 05545 AFN77183.1 ... 347
consensus
```

 non conserved
 similar
 ≥ 50% conserved