

logo

NTDB id 600 KW2 RS01765 WP 011675413.1	MATKKK....TNFDDITKKYGA	ERD	KAL	ADAL	AL	IEKD	FGKGS	LMRLGE	A	ANQKVS	VSS	SGSL	ALD	I	ALG	AGGY	PKGR	74				
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAKKP....KKLEEISKKFGA	ERE	KAL	NDAL	KL	IEKD	FGKGS	SIMRLGER	AEQKVQ	VMS	SGSL	ALD	I	ALG	SGGY	PKGR	73					
NTDB id 228 SPD RS09265 WP 001085462.1	.MAKKP....KKLEEISKKFGA	ERE	KAL	NDAL	KL	IEKD	FGKGS	SIMRLGER	AEQKVQ	VMS	SGSL	ALD	I	ALG	SGGY	PKGR	73					
NTDB id 194 SPR RS08825 WP 001085462.1	.MAKKP....KKLEEISKKFGA	ERE	KAL	NDAL	KL	IEKD	FGKGS	SIMRLGER	AEQKVQ	VMS	SGSL	ALD	I	ALG	SGGY	PKGR	73					
NTDB id 159 SP RS09750 WP 001085462.1	.MAKKP....KKLEEISKKFGA	ERE	KAL	NDAL	KL	IEKD	FGKGS	SIMRLGER	AEQKVQ	VMS	SGSL	ALD	I	ALG	SGGY	PKGR	73					
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAKKP....KKLDEISKKFGA	ERE	KAL	NDAL	KL	IEKD	FGKGS	SIMRLGER	AEQKVQ	VMS	SGSL	ALD	I	ALG	SGGY	PKGR	73					
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAKKP....KKLDEISKKFGA	ERE	KAL	NDAL	KL	IEKD	FGKGS	SIMRLGER	AEQKVQ	VMS	SGSL	ALD	I	ALG	SGGY	PKGR	73					
NTDB id 453 Spy49 1753c ACI62003.1	.MAKKL....KKNEEITKKFG	DERR	KAL	DDAL	KN	IEKD	FGKGA	VMRLGER	AEQKVQ	VMS	SGSL	ALD	I	ALG	AGGY	PKGR	73					
NTDB id 408 SMU RS09530 WP 002262392.1	.MAKRI....KKTEEITKKFG	DERK	KAL	DDAL	KN	IEKD	FGKGA	VMRLGER	AEQKVQ	VMS	SGSL	ALD	I	ALG	AGGY	PKGR	73					
NTDB id 115 BSU 16940 NP 389576.2	MSDRQAALDMALK	QIEK	QFGKGS	SIM	KLGE	K	TDTR	I	STVP	SGSL	ALD	TALG	I	GGY	PRGR	58						
NTDB id 625 LCA RS02525 WP 011374196.1	MAKDERQAALDAALK	KIEK	NFGKGS	SIM	RMGE	K	VDTQ	VSTV	SSGSL	ALDE	ALG	VGGY	PRGR	60								
NTDB id 1313 DR RS12030 WP 010888966.1	MSKDATKEISAPTD	AKERS	KA	TET	AMS	QIEK	A	FGKGS	SIM	KLGA	E	SKLD	VQV	VSTG	SLSL	D	ALG	VGGI	PRGR	72		
NTDB id 1245 Cj1673c YP 002345041.1	MDDNKRKSLDAAL	KS	LDKT	FGKGT	ILRL	GDK	EVEQ	I	DSIG	TGS	VGLD	L	ALG	I	GGV	PKGR	59					
NTDB id 1214 NCTC11637 00359 SQJ03206.1	MAIDEDKQKAI	SLAI	KQID	KVFG	KGAL	VRLG	DK	QVEK	I	DAIS	TGSL	GLD	L	ALG	I	GGV	PKGR	61				
NTDB id 1211 C694 RS00795 WP 000963128.1	MAIDEDKQKAI	SLAI	KQID	KVFG	KGAL	VRLG	DK	QVEK	I	DAIS	TGSL	GLD	L	ALG	I	GGV	PKGR	61				
NTDB id 1334 RAOC RS04870 WP 004918236.1	MAKT..ETTS	PNDD	KKK	A	AAV	LEK	LDKT	YGKGT	VM	KLGD	GTVD	HN	IEV	I	PSG	SLGL	D	ALG	VGGY	PKGR	68	
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKKSSKNNTV..VKQ	VEPE	QKKQ	A	LEA	AAL	QIEK	QFGKGS	SIM	KLGT	EQ	LD	IES	V	STG	SLGL	D	ALG	I	GGL	PMGR	76
NTDB id 1130 NGFG RS03960 WP 003688695.1	MSDDKSKALAA	AAL	QIEK	SFGKGA	IM	KMDGS	Q	Q	EEN	LEV	I	STG	SLGL	D	ALG	V	GGL	PRGR	60			
NTDB id 1124 NGFG RS03960 WP 003688695.1	MSDDKSKALAA	AAL	QIEK	SFGKGA	IM	KMDGS	Q	Q	EEN	LEV	I	STG	SLGL	D	ALG	V	GGL	PRGR	60			
NTDB id 1123 OK783 RS03845 WP 003688695.1	MSDDKSKALAA	AAL	QIEK	SFGKGA	IM	KMDGS	Q	Q	EEN	LEV	I	STG	SLGL	D	ALG	V	GGL	PRGR	60			
NTDB id 1427 RS RS02760 WP 011000510.1	.MED.....GK..KAAS	MSAEK	QK	A	AA	AAL	QIEK	QFGKGS	SIM	KMD	A	EVEP	VQV	VSTG	SLGL	D	ALG	V	GGL	PRGR	68	
NTDB id 105547 A5956 RS04650 WP 000963143.1	MAIDENKQK	A	AA	AAL	GQIEK	QFGKGS	SIM	RLGED	RSMD	VET	I	STG	SLSL	D	I	ALG	AGGL	PMGR	61			
NTDB id 1165 A1552VC RS01565 WP 000344154.1	MDENKQK	A	AA	AAL	GQIEK	QFGKGS	SIM	RLGDN	RAMD	VET	I	STG	SLSL	D	I	ALG	AGGL	PMGR	59			
NTDB id 1142 GTF74 RS11550 WP 000344154.1	MDENKQK	A	AA	AAL	GQIEK	QFGKGS	SIM	RLGDN	RAMD	VET	I	STG	SLSL	D	I	ALG	AGGL	PMGR	59			
NTDB id 1205 PSJM300 05545 AFN77183.1	MDENKK	A	AA	AAL	GQIEK	QFGKGA	VMR	MGDH	DRQA	I	PSI	STG	SLGL	D	I	ALG	I	GGL	PKGR	59		
NTDB id 1022 ACIAD RS06390 WP 004925639.1	MDDNKSK	A	LQA	AALS	QIEK	QFGKNT	VM	RLGDN	TVQA	VEA	VSTG	SLT	L	D	I	ALG	I	GGL	PKGR	59		
NTDB id 1074 ABD1 RS10195 WP 000344167.1	MDENKSK	A	LQA	AALS	QIEK	QFGKNT	VM	RLGDN	TVQA	VEA	VSTG	SLT	L	D	I	ALG	I	GGL	PKGR	59		
consensus	***	***	*	***!	*!!	*****	*		***!!	*!!	*!!	*!!	*!!	*!!	*!!	*!!						

```

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 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 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 105547 A5956 RS04650 WP 000963143.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

```



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 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 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 105547 A5956 RS04650 WP 000963143.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus



```

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 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 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 105547 A5956 RS04650 WP 000963143.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

```



logo

NTDB id 600 KW2 RS01765 WP 011675413.1	DEKIGQGA	EKAKNYLKEHQDV	DEIDHKVRAAHG	LDDSEVAETEEETT	ASKTKAKAKKEE	EKAVETEEIELELED		387
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKKDE	PKKEEA	.VNEEVPLDLGDELEIE		385
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKKDE	PKKEEA	.VNEEVPLDLGDELEIE		385
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKKDE	PKKEEA	.VNEEVPLDLGDELEIE		385
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKKDE	PKKEEA	.VNEEVPLDLGDELEIE		385
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLAADNPEIF	DEIDHQVRVQFGL	IDGEEIAES	KKDE	AAQVDS	.VNEEVTLDLGDELEIE	381
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLAADNPEVFAE	IDHQVRVQFGL	IDGEEAAES	KKDE	VAQVDS	.VNEEVTLDLGDELEIE	381
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEEEESAMAVASE	E	TDDLALDLN	GIEIE	377
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEEDNTEEEKQSSKEK	ETDE	K..ADKNLVLEL	DDTIELE	382
NTDB id 115 BSU 16940 NP 389576.2	EE	RLGQGREN	AKQFLKENKDIMLMIQE	QIREHYGL	DNNGVVQQAEETQEEL	EFEE	E.....	348
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQGS	ENAKNYLADHEDVE	DEVRLKVR	AAYGISD	VPEEDLPTTEDE	.QI.NILPDDST	EE	355
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQGS	KEKTIA	YIAERPEMEQE	IRDRVMAAIRAGNAGE	APALAPAPAAPEAA	EA		363
NTDB id 1245 Cj1673c YP 002345041.1	DK	KLGGGREN	SKAFLKENPEIA	DEITKAIQNSMG	TEGM	ISGSEDDEG	EE	343
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DK	KLGGGREN	AKALLKEDKALADE	ITLKI	KESIGSNEE	IMPLPDEPL	EEME	347
NTDB id 1211 C694 RS00795 WP 000963128.1	DK	KLGGGREN	AKALLKEDKALADE	ITLKI	KESIGSNEE	IMPLPDEPL	EEME	347
NTDB id 1334 RAOC RS04870 WP 004918236.1	DT	KLGGGRD	TVKELIKDNPELA	AELEAKI	IREKLQAK			343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GT	KIGQGNNA	VKWLKENPEIA	DKLEQEIR	NTLASNPN	SVLKATASDSN	...DES	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQGS	KDNVRVWLKENPEIS	DEIDAKIRALNG	VEMH	ITEG	T...QDET	DGERPEE	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQGS	KDNVRVWLKENPEIS	DEIDAKIRALNG	VEMH	ITEG	T...QDET	DGERPEE	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQGS	KDNVRVWLKENPEIS	DEIDAKIRALNG	VEMH	ITEG	T...QDET	DGERPEE	348
NTDB id 1427 RS RS02760 WP 011000510.1	GE	RIGQGRD	NCREFLRENAELARE	EIENKVR	REHLGVTPM	GAVTLAEE	.VE...ED	352
NTDB id 105547 A5956 RS04650 WP 000963143.1	GEKIGQGS	KANATAWLKDN	PETAKEIEKKV	RELLLSNP	N....STPDFSV	...D...DSEG	VAETNEDF	353
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GD	KIGQGS	KANACKY	LKENPEIAKTLD	KKLREMLLN	PNEN....MQLIAETSSAA	...DDV	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GD	KIGQGS	KANACKY	LKENPEIAKTLD	KKLREMLLN	PNEN....MQLIAETSSAA	...DDV	354
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQGS	KANA	AKYLEENPEIG	QIEEQ	IRAKLLV	TSA....NTKATPVAEDL	...ADAD	347
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GN	KIGQGN	NNVIRY	LEENPQISTE	IEAVIREQLL	TKAS....DQTAA	.HDETE...EEP	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GN	KIGQGN	NNVIRY	FEENNQIAE	EIERNIREQLL	TTGT....NGAVQ	.I.EDE...EEP	349
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 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 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 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 105547 A5956 RS04650 WP 000963143.1	...	353
NTDB id 1165 A1552VC RS01565 WP 000344154.1	...	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	...	354
NTDB id 1205 PSJM300 05545 AFN77183.1	...	347
NTDB id 1022 ACIAD RS06390 WP 004925639.1	...	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	...	349

consensus

 non conserved
 similar
 ≥ 50% conserved