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NTDB id 600 KW2 RS01765 WP 011675413.1	MATKK....KTNFDDITKKYGA	ERDKALADALALIEKD	FGKGSIMRLGEA	.ANQKVS	VSSGSLALD	I	ALGAGGY	PKGR	74
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAKK....PKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGR	73
NTDB id 228 SPD RS09265 WP 001085462.1	.MAKK....PKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGR	73
NTDB id 194 SPR RS08825 WP 001085462.1	.MAKK....PKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGR	73
NTDB id 159 SP RS09750 WP 001085462.1	.MAKK....PKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGR	73
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAKK....PKKLDEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGR	73
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAKK....PKKLDEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVM	SSGSLALD	I	ALGSGGY	PKGR	73
NTDB id 453 Spy49 1753c ACI62003.1	.MAKK....LKKNEEITKKFG	DERRKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQVM	SSGSLALD	I	ALGAGGY	PKGR	73
NTDB id 408 SMU RS09530 WP 002262392.1	.MAKR....IKKTEEITKKFG	DERKKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQVM	SSGSLALD	I	ALGAGGY	PKGR	73
NTDB id 115 BSU 16940 NP 389576.2	MSDRQAALDMALKQ	IEKQFGKGSIMKLGEK	.TDTRIST	VP	SGSLALD	T	ALGIGGY	PRGR	58
NTDB id 625 LCA RS02525 WP 011374196.1	MAKDERQAALDAALKK	IEKNFGKGSIMRMGEK	.VDTQVST	VSSGSLAL	DEALGVGGY	PRGR			60
NTDB id 1313 DR RS12030 WP 010888966.1	MSKDATKEISAPTD	AKERSKATETAM	SQIEKAFGKGSIMKLGAE	.SKLDVQV	VSTGSLSLD	I	ALGVGGI	PRGR	72
NTDB id 1245 Cj1673c YP 002345041.1	MDDNKRKSLDAALKS	LDKTFGKGTILRLGDK	.EVEQIDS	IGTGSVGLD	I	ALGIGGV	PKGR		59
NTDB id 1214 NCTC11637 00359 SQJ03206.1	MAIDEDKQKAI	SLAIKQIDKVF	FGKGALVRLGDK	.QVEKIDA	ISTGSLGLD	I	ALGIGGV	PKGR	61
NTDB id 1211 C694 RS00795 WP 000963128.1	MAIDEDKQKAI	SLAIKQIDKVF	FGKGALVRLGDK	.QVEKIDS	ISTGSLGLD	I	ALGIGGV	PKGR	61
NTDB id 1334 RAOC RS04870 WP 004918236.1	MAKT..ETTS	PNDDKKKALA	AVLEKLDKTYGKGTVMKLG	DGTVDHNI	EVIPSGSLGLD	I	ALGVGGY	PKGR	68
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKKSSKNNTV..VKQ	VEPEQKKQALEA	AALQIEKQFGKGSIMKLGQT	.EQLDIES	VSTGSLGLD	I	ALGIGGL	PMGR	76
NTDB id 1130 NGFG RS03960 WP 003688695.1	MSDDKSKALAA	AALQIEKSFGKGAIMKMDGSQ	QREENLEVISTGSLGLD	I	ALGVGGL	PRGR			60
NTDB id 1124 NGFG RS03960 WP 003688695.1	MSDDKSKALAA	AALQIEKSFGKGAIMKMDGSQ	QREENLEVISTGSLGLD	I	ALGVGGL	PRGR			60
NTDB id 1123 OK783 RS03845 WP 003688695.1	MSDDKSKALAA	AALQIEKSFGKGAIMKMDGSQ	QREENLEVISTGSLGLD	I	ALGVGGL	PRGR			60
NTDB id 1427 RS RS02760 WP 011000510.1	.MEDG.....K..KAAS	MSAEKQKALAA	AALQIEKQFGKGSIMKMDA	.EVEPVQV	VSTGSLGLD	I	ALGVGGL	PRGR	68
NTDB id 1165 A1552VC RS01565 WP 000344154.1	MDENKQKALAA	ALGQIEKQFGKGSIMRLGDN	.RAMDVET	ISTGSLSLD	I	ALGAGGL	PMGR		59
NTDB id 1142 GTF74 RS11550 WP 000344154.1	MDENKQKALAA	ALGQIEKQFGKGSIMRLGDN	.RAMDVET	ISTGSLSLD	I	ALGAGGL	PMGR		59
NTDB id 93872 00714 RS07180 WP 000344169.1	MDENKSKALQA	ALSQIEKQFGKNTVMRLGDN	.TVQAVEA	VSTGSLTLD	I	ALGIGGL	PKGR		59
NTDB id 1074 ABD1 RS10195 WP 000344167.1	MDENKSKALQA	ALSQIEKQFGKNTVMRLGDN	.TVQAVEA	VSTGSLTLD	I	ALGIGGL	PKGR		59
NTDB id 1022 ACIAD RS06390 WP 004925639.1	MDDNKSKALQA	ALSQIEKQFGKNTVMRLGDN	.TVQAVEA	VSTGSLTLD	I	ALGIGGL	PKGR		59
NTDB id 1205 PSJM300 05545 AFN77183.1	MDENKKRALAA	ALGQIEKQFGKGAVMRMGDH	.DRQAIPS	ISTGSLGLD	I	ALGIGGL	PKGR		59
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 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
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NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1
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NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
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NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
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NTDB id 93872 00714 RS07180 WP 000344169.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus



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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
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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
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NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 93872 00714 RS07180 WP 000344169.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1
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NTDB id 600 KW2 RS01765 WP 011675413.1	DEKIGQGA	EKAKNYLKEHQDV	DEIDHKVRAAHG	LDDSEVAETEEE	TTASKTK	..AKAKKEEKAVETEEIELELED..	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTE	NKKDE	PKKEEA..VNEEVPLDLGDEL	382
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTE	NKKDE	PKKEEA..VNEEVPLDLGDEL	382
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTE	NKKDE	PKKEEA..VNEEVPLDLGDEL	382
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTE	NKKDE	PKKEEA..VNEEVPLDLGDEL	382
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLADNPEVFAE	IDHQVRVQFGL	LIDGEEAAE	SKKDE	VAQVDS..VNEEVTLDLGDEL	378
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLADNPEIF	DEIDHQVRVQFGL	LIDGEEIAE	SKKDE	AAQVDS..VNEEVTLDLGDEL	378
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEEEESAMAV	ASE	E.....TDDLALDLNGI	374
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEEDNTEEKQSS	KEK	ETDEK..ADKNLVLELDDTI	379
NTDB id 115 BSU 16940 NP 389576.2	EERLGGG	RENAKQFLKENKDIM	LMIQEQIREHYGL	DNNGVVQQAAEE	TQEEL	E..FE.E.....	348
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQG	RENAKNYLADHED	VEDEVRLKVR	AAYGISDVPEED	LPTE	DE.QI.N..ILPDDST.....EE	355
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQG	KEKTIA	YIAERP	MEQEIRDRVMAA	IRAGNAGEAPALAPAPAAPEAAEA	.....	363
NTDB id 1245 Cj1673c YP 002345041.1	DKKLGGG	RENSKAF	LKENPEIADEIT	KA	IQNSMCI	EGMISGS..EDDEGE..E	343
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKLGGG	RENAKALLKED	KALADEITLK	IKESIGS	NEEIMPL	..PDEPLE..EME	347
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKLGGG	RENAKALLKED	KALADEITLK	IKESIGS	NEEIMPL	..PDEPLE..EME	347
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKLGGG	RD	TVKELIKDN	PELAELEAKI	REKLQAK	.....	343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQG	KNN	AVKWLKENPEIA	DKLEQEIRNTL	ASNPNSVLK	..ATASDSNDESDVEEFSE	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEIS	DEIDAKIRALNG	VEMHITEG	..TQDET	D.....GERPE	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEIS	DEIDAKIRALNG	VEMHITEG	..TQDET	D.....GERPE	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEIS	DEIDAKIRALNG	VEMHITEG	..TQDET	D.....GERPE	348
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQG	RDNCREF	LRENAELAREI	ENKVR	REHLGVTPMGAV	..TLAEEVEED	352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQG	KANACKYLKENPEIA	AKTLDKKL	REMLLN	PENMQLI	..AETSSAAD	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQG	KANACKYLKENPEIA	AKTLDKKL	REMLLN	PENMQLI	..AETSSAAD	354
NTDB id 93872 00714 RS07180 WP 000344169.1	GNKIGQG	KNNVIRYFE	ENTQIAEEI	ERNIREQL	LTGTNGAV	..Q.I.EDEE	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQG	KNNVIRYFE	ENNQIAEEI	ERNIREQL	LTGTNGAV	..Q.I.EDEE	349
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQG	KNNVIRYLE	ENPQISTE	IEAVIREQL	LTKASDQTA	..A.HDETEE	349
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQG	KANA	AKYLEENPEIG	QIEEQ	IRAKLLVTSANTKA	..TPVAEDLADAD..I	347
consensus	***!!!	*****	**	*****	*****	**	*

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NTDB id 600 KW2 RS01765 WP 011675413.1		387						
NTDB id 269 KZH43 RS08665 WP 001085462.1	EIEIEE	388						
NTDB id 228 SPD RS09265 WP 001085462.1	EIEIEE	388						
NTDB id 194 SPR RS08825 WP 001085462.1	EIEIEE	388						
NTDB id 159 SP RS09750 WP 001085462.1	EIEIEE	388						
NTDB id 527 SMSK321 RS11065 WP 001085454.1	EIEIEE	384						
NTDB id 499 SM12261 RS08315 WP 078228268.1	EIEIEE	384						
NTDB id 453 Spy49 1753c ACI62003.1	EIED..	378						
NTDB id 408 SMU RS09530 WP 002262392.1	ELED..	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						
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NTDB id 1165 A1552VC RS01565 WP 000344154.1		354						
NTDB id 1142 GTF74 RS11550 WP 000344154.1		354						
NTDB id 93872 00714 RS07180 WP 000344169.1	.....	349						
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