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NTDB id 600 KW2 RS01765 WP 011675413.1	MATK.....KKTNFDDITKKYGA	ERDKALADALALIEKD	FGKGSIMRLGEA	.ANQKVS	VSSGSLALD	I	ALGAGGY	PKGR	74	
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAK.....KPKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 228 SPD RS09265 WP 001085462.1	.MAK.....KPKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 194 SPR RS08825 WP 001085462.1	.MAK.....KPKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 159 SP RS09750 WP 001085462.1	.MAK.....KPKKLEEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAK.....KPKKLDEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAK.....KPKKLDEISKKFGA	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQV	MSSGSLALD	I	ALGSGGY	PKGR	73	
NTDB id 453 Spy49 1753c ACI62003.1	.MAK.....KLKKNEEITKKFGD	ERRKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQV	MSSGSLALD	I	ALGAGGY	PKGR	73	
NTDB id 408 SMU RS09530 WP 002262392.1	.MAK.....RIKKTEEITKKFGD	ERRKALDDALKNIEKD	FGKGAVMRLGER	.AEQKVQV	MSSGSLALD	I	ALGAGGY	PKGR	73	
NTDB id 625 LCA RS02525 WP 011374196.1	MAKD	ERQAALDAALKKIEKN	FGKGSIMRMGEK	.VDTQVST	VSSGSLALD	E	ALGVGGY	PRGR	60	
NTDB id 43983 SAVC RS05990 WP 000368166.1	MDN	DRQKALDTV	IKNMEKS	SFGKGAVMKL	GDN	.IGRRVSTT	TGSVTL	DNALGVGGY	PKGR	59
NTDB id 115 BSU 16940 NP 389576.2	MS	DRQAALDMALKQIEKQ	FGKGSIMKLGEK	.TDTRI	ISTVPSGSLALD	T	ALGIGGY	PRGR	58	
NTDB id 1313 DR RS12030 WP 010888966.1	MSKDATKEISAPTD	AKERSKAT	IETAMSQIEKA	FGKGSIMKLGA	E	.SKLDVQVV	STGSLSLD	LALGVGGI	PRGR	72
NTDB id 1245 Cj1673c YP 002345041.1	MDDN	KRKSLDAALKSLDKT	FGKGTILRLGDK	.EVEQIDS	IGTGSVGLD	L	ALGIGGV	PKGR	59	
NTDB id 1211 C694 RS00795 WP 000963128.1	MAIDE	DKQKATISLA	IKQIDKVF	FGKGALVRLGDK	.QVEKIDS	ISTGSLGLD	LALGIGGV	PKGR	61	
NTDB id 1214 NCTC11637 00359 SQJ03206.1	MAIDE	DKQKATISLA	IKQIDKVF	FGKGALVRLGDK	.QVEKIDA	ISTGSLGLD	LALGIGGV	PKGR	61	
NTDB id 1334 RAOC RS04870 WP 004918236.1	MAKT..ETTSPND	DKKKALAAVLEK	LDKTYGKGTVMKLG	DGTVDHNI	EVIPSGSLGLD	L	ALGVGGY	PKGR	68	
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKKSSKNNTV..VKQVEPEQ	KKQALEAALA	QIEKQFGKGSIMKLQGT	.EQLDIES	VSTGSLGLD	L	ALGIGGL	PMGR	76	
NTDB id 1130 NGFG RS03960 WP 003688695.1	MSD	DKSKALAAALA	QIEKSFGKGAIMKMDGSQ	QEENLEVISTGSLGLD	L	ALGVGGL	PRGR	60		
NTDB id 1124 NGFG RS03960 WP 003688695.1	MSD	DKSKALAAALA	QIEKSFGKGAIMKMDGSQ	QEENLEVISTGSLGLD	L	ALGVGGL	PRGR	60		
NTDB id 1123 OK783 RS03845 WP 003688695.1	MSD	DKSKALAAALA	QIEKSFGKGAIMKMDGSQ	QEENLEVISTGSLGLD	L	ALGVGGL	PRGR	60		
NTDB id 1427 RS RS02760 WP 011000510.1	.MEDG.....K..KAASMSA	EKQKALAAALA	QIEKQFGKGSIMKMGDA	.EVEPVQVV	STGSLGLD	V	ALGVGGL	PRGR	68	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	MDEN	KQKALAAALGQIEKQ	FGKGSIMRLGDN	.RAMDVET	ISTGSLSLD	I	ALGAGGL	PMGR	59	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	MDEN	KQKALAAALGQIEKQ	FGKGSIMRLGDN	.RAMDVET	ISTGSLSLD	I	ALGAGGL	PMGR	59	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	MDDN	KSKALQAALSQIEKQ	FGKNTVMRLGDN	.TVQAVEA	VSTGSLTLD	I	ALGIGGL	PKGR	59	
NTDB id 1074 ABD1 RS10195 WP 000344167.1	MDEN	KSKALQAALSQIEKQ	FGKNTVMRLGDN	.TVQAVEA	VSTGSLTLD	I	ALGIGGL	PKGR	59	
NTDB id 1205 PSJM300 05545 AFN77183.1	MDEN	KKRALAAALGQIEKQ	FGKGAVMRMGDH	.DRQAIPS	ISTGSLGLD	I	ALGIGGL	PKGR	59	
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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 625 LCA RS02525 WP 011374196.1
NTDB id 43983 SAVC RS05990 WP 000368166.1
NTDB id 115 BSU 16940 NP 389576.2
NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
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
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NTDB id 600 KW2 RS01765 WP 011675413.1	SVRLDVRGSTKIEEGS.GDNKTQIGKITKIKVVKNKVAPPFKEAVALVDIMFGEGISSTGELINIAVEEGITIKKSGAWFAYN	312
NTDB id 269 KZH43 RS08665 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETNKGKETKIKVVKNKVAPPFKEAVVEIMYEGEGISKTGELLKIASDLDIKKAGAWYSYK	311
NTDB id 228 SPD RS09265 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETNKGKETKIKVVKNKVAPPFKEAVVEIMYEGEGISKTGELLKIASDLDIKKAGAWYSYK	311
NTDB id 194 SPR RS08825 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETNKGKETKIKVVKNKVAPPFKEAVVEIMYEGEGISKTGELLKIASDLDIKKAGAWYSYK	311
NTDB id 159 SP RS09750 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETNKGKETKIKVVKNKVAPPFKEAVVEIMYEGEGISKTGELLKIASDLDIKKAGAWYSYK	311
NTDB id 499 SM12261 RS08315 WP 078228268.1	SVRLDVRGSTQIKGTG.DQKDTNKGKETKIKVVKNKVAPPFKEAFVEIMYEGEGISKTGELLKIASDLDIKKAGAWYSYK	311
NTDB id 527 SMSK321 RS11065 WP 001085454.1	SVRLDVRGSTQIKGTG.DQKDTNKGKETKIKVVKNKVAPPFKEAFVEIMYEGEGISKTGELLKIASDLDIKKAGAWYSYK	311
NTDB id 453 Spy49 1753c ACI62003.1	SVRLDVRGTTQIKGTG.DQKDSIGKETKIKVVKNKVAPPFKEAEVEIMYEGEGISRTGELVKIASDLDIQKAGAWFSYN	311
NTDB id 408 SMU RS09530 WP 002262392.1	SVRLDVRGNTQIKGTG.EQKDSNIGKETKIKVVKNKVAPPFKEAFVEIIMYEGEGISRTGELVKIASDLGIQKAGAWYSYN	311
NTDB id 625 LCA RS02525 WP 011374196.1	TVRLEVRRRAETIKNGT.....DMIGNRARIKVVKNKVAPPFKEAEVDIMYGGGISRTGELVDMAVEKDIINKSGSWYSYG	294
NTDB id 43983 SAVC RS05990 WP 000368166.1	SVRLEVRRAEQLKQGQ.....EIVGNRTKIKVVKNKVAPPFRVAEVDIMYGGGISKEGELIDLGVENDIVDKSGAWYSYN	293
NTDB id 115 BSU 16940 NP 389576.2	SVRLEVRRAEQLKQGN.....DVMGNKTKIKVVKNKVAPPFRTAEVDIMYEGEGISKEGETIIDLGTELIDIVQKSGSWYSYE	292
NTDB id 1313 DR RS12030 WP 010888966.1	SVRLDVRKIGQ....PTKVGNDAAVANTVKIKTVKNKVAAPFKEVELALVYGKGFQDQLSDLVGLAADMDIINKAGSFYSYG	307
NTDB id 1245 Cj1673c YP 002345041.1	SVRLDVRKVAT....L.KQNEEPIGNRVKVVKNKVAPPFRQAEFDVDMFGEGLSREGELIDYGVKLDIVDKSGAWFSYK	294
NTDB id 1211 C694 RS00795 WP 000963128.1	SVRIDIRRIAS....L.KQNEQHIGNRAKAKVVKNKVAPPFREAEFDIMFGEGISKEGETIIDYGVKLDIVDKSGAWLSYQ	296
NTDB id 1214 NCTC11637 00359 SQJ03206.1	SVRIDIRRIAA....L.KQNEQHIGNRAKAKVVKNKVAPPFREAEFDIMFGEGISKEGETIIDYGVKLDIVDKSGAWLSYQ	296
NTDB id 1334 RAOC RS04870 WP 004918236.1	SVRIDIRRLSDTGKIKDKSGEVIGNRTKVVVVKNKVAPPFKSAEFDIMYEGEGVSKVGEILDVATDLDIQKSGSWFSYQ	307
NTDB id 1389 A4U84 RS07560 WP 021112712.1	SVRLDIRRCGV....V.KDGDEIIGSETKVVVVKNKVAPPFREVFQDIMYEGEGISRMNELLILAEANGFIKKSGAWFSYD	310
NTDB id 1130 NGFG RS03960 WP 003688695.1	SVRLDIRRTGS....I.KKGEVVLGNETRKKVKNKVAPPFRQAEFDILYEGEGISWEGELIDIGVKNDIINKSGAWYSYN	294
NTDB id 1124 NGFG RS03960 WP 003688695.1	SVRLDIRRTGS....I.KKGEVVLGNETRKKVKNKVAPPFRQAEFDILYEGEGISWEGELIDIGVKNDIINKSGAWYSYN	294
NTDB id 1123 OK783 RS03845 WP 003688695.1	SVRLDIRRTGS....I.KKGEVVLGNETRKKVKNKVAPPFRQAEFDILYEGEGISWEGELIDIGVKNDIINKSGAWYSYN	294
NTDB id 1427 RS RS02760 WP 011000510.1	SVRLDIRRIGS....I.KKGEDEVGNETKVVVVKNKVAPPFREAIFFDILYGAGVSREGEIIDLGVEAKVVEKSGAWYSYN	302
NTDB id 1165 A1552VC RS01565 WP 000344154.1	SVRLDIRRTGA....I.KEGEEVVGNETRIKVVKNKIAAPFKEANTQIMYGGGFNREGELIDLGVKHKMVEKSGAWYSYN	293
NTDB id 1142 GTF74 RS11550 WP 000344154.1	SVRLDIRRTGA....I.KEGEEVVGNETRIKVVKNKIAAPFKEANTQIMYGGGFNREGELIDLGVKHKMVEKSGAWYSYN	293
NTDB id 1022 ACIAD RS06390 WP 004925639.1	SVRLDIRRIGQ....V.KEGDEIIGSETKVVVVKNKMAPPFREAIFFQILYGKGYNQLGELVDLAVQQNIVQKAGAWYSYQ	293
NTDB id 1074 ABD1 RS10195 WP 000344167.1	SVRLDIRRIGQ....V.KEGDEIIGSETKVVVVKNKMAPPFREAIFFQILYGKGYNQLGELVDLAVQQDIVQKAGAWYSYQ	293
NTDB id 1205 PSJM300 05545 AFN77183.1	SVRLDIRRTGA....V.KEGDEVVGSETRVVVVKNKVAPPFRQAEFFQILYGKGIIYRNGEIIDLGVQQGLVEKSGAWAYK	293
consensus	*!!**!* * ** *****!*****!!*!!*!!* * *****!*!*** ***** ** *** ! !*****!	

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NTDB id 1205 PSJM300 05545 AFN77183.1
consensus



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NTDB id 194 SPR RS08825 WP 001085462.1	IEE	388	
NTDB id 159 SP RS09750 WP 001085462.1	IEE	388	
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NTDB id 527 SMSK321 RS11065 WP 001085454.1	IEE	384	
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NTDB id 408 SMU RS09530 WP 002262392.1	D..	383	
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NTDB id 1205 PSJM300 05545 AFN77183.1	...	347	
consensus			

- X non conserved
- X similar
- X ≥ 50% conserved