

MlaF E. coli	-----MEQSVANLVDMRDVSFTGRNCRIFDNISLTVPRGKITAIMGPSG	44
MlaF R. rickettsii	-----MSVEEFPIKIRLSYKSFANHVKLDGIDLDVKKGGSLVILGGSG	43
MlaF W. pipientis	-----MCNPVISIDLCSLYFNRRVLNLHNLNISRGKSLAILGGSG	41
MlaF E. ruminantium	-----MYCISLSDLTHAFHDHKILNGINLNNAVAYGESLVILGGSG	39
MlaF N. moscoviensis	-----MLKLVGKVKKLGQQVQLQDILTTPPKLTITIGRSG	37
MlaF F. tularensis	-----MCDISFKNVSFYDRSRIYDDITFTIPTNKTITILGPSPG	39
MlaF N. gonorrhoeae	-----MSPSPFIEMKDVAFYAGDRPILNDINFSPQGNFAAVMGSSG	42
MlaF B. cepacia	-----MSPTPTTELLRLVDVFGDRLVLNLNLRFGRGOVVAMGGSG	45
MlaF P. aeruginosa	-----MSTDASAYVELKGLFLTFKRGSRAIFDNIDVRIPRGKVTIIMGPSG	44
MlaF L. pneumophila	-----MPDNWNEIKLNFSLTDLDRCIFDGIDMVVKQKITAIMGPSG	41
MlaF A. baumannii	-----MNNKTPLSTQSLIEVKNLSFNNGRERVINYDNISLNIRRGQITAIMGPSG	48
MlaF P. luteoviolaceae	-----MESDLSQSIVEVKDVTFSGRSERVIYNKMSFSVPFRGKITAIMGPSG	45
MlaF H. influenzae	-----MNQNLEIEVNKLTFFRKGRVIDYNLNLQVKKGKITAIMGPSG	41
MlaF V. cholerae	-----MSQSDLVTIKNLFRRSQRVFIDDIDLHVPGKVTIAIMGPSG	42
MlaF K. pneumoniae	----MLARQVFSKDDFMSQTQANLVEVRGIRSRGDRIFFDISLVPRGKITAIMGPSG	56
Teichoic Acid Exporter A. herbarius	MEHAVIVENVTKYKFLFKTSERLLMDLPGGYGEDFYALNRVSTADRGDVIGVGVNG	60
O-Antigen Exporter A. aeolicus	--MMIRVDFVWKYKYKYPQDRKEIIFRPKFHEELWLWKGINLIEKGEVLGIIVGPN	58
Maltose Importer E. coli	-----MASVOLQNVTKAWGEVVSVDINLDIHGEHFVVFVGPSSG	39
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MlaF E. coli	IGKTTLLRLIGGQIAPDHGEILFDGENIPAMSR-SRLYTvrkrmsmlfqsqgalfptdmnv	103
MlaF R. rickettsii	SGKSVLKNIIVGLIKPDKGKIFINDVEIQDISS-KQKFEMMDGIGLFGQGLAFDSLNIR	102
MlaF W. pipientis	SGKSVLAKTIICLLLLPDSGSIHV-----NS-----KSKSPGVLFQNSALFDYITW	87
MlaF E. ruminantium	SGKSVLTKTILGLISPVSQGVIVDGDIVKHNS-----LSKNFQGVLFQNCALFDSLTV	93
MlaF N. moscoviensis	EKGSVLLRHMIIGLPDDEQGVWVDGVEISRGLRG-HALNEVRRKFRAMLFGCAALFDSMTV	96
MlaF F. tularensis	AGKTTTLQLIAGLIKPTLGKICIDNAIEKNTKETOLEKLHRHMGLFQSGALFTHLSV	99
MlaF N. gonorrhoeae	SGKTTLLRLITGQIRPQSQVGLIEGRDLAGFSA-DELYEHRRRMGVLFQHGALFDTLSV	101
MlaF B. cepacia	CGKTTTVLRILIGGLVRARRGQVLPFGADVGAQTR-DGLYLALRRKMGMFLPFQGFALFDTMSV	104
MlaF P. aeruginosa	CGKTTLLRLIASQRLPRSKEGVWVNGQNLPLQLSR-GDLFPMRKQFQGVLFQSGALFTDLV	103
MlaF L. pneumophila	SGKTTTLRLIGAQTIPDPGQIVYVNGQNLHQLSLR-KALYETRNMGLLPQGAALFTHLSV	100
MlaF A. baumannii	TGKTTTLRLIGGQLPVDPHGEVLLDGGDKIAQMSR-QELFAARARMGMFLFQSGALFTHSV	107
MlaF P. luteoviolaceae	IGKTTMLRLIGGQLRVDPHGEVLLDGGDKIAQMSR-SELYQARKQSMFLFQSGALFDTMSV	104
MlaF H. influenzae	IGKTTLLKLIGGQLMPEQGEILFDGQDICRLSN-RELYEVRKRKMGMFLFQSGALFTDISTF	100
MlaF V. cholerae	IGKTTLLRLIGGQLLPEQGEIWFDPGENIPTLSR-RKLYRARKKMGMFLFQSGALFTDLNV	111
MlaF K. pneumoniae	IGKTTTLRLIGGQIPDPGQIVYVNGQNLHQLSLR-SRLYTvrkrmsmlfqsqgalfptdmnv	103
Teichoic Acid Exporter A. herbarius	SGKSTLSNIIAGILPPTSGETIKIDQG-ASLIAI-----SGTFNMQLTG	102
O-Antigen Exporter A. aeolicus	CGKSTLLRLITGVTEPDKGFVERSGVGLGLE-----GCTGFNYELSG	103
Maltose Importer E. coli	CGKSTLLRMIAGLETITSGDLFIGEKRMDNTPP-----AERGVMVVFQSYALYPHLSVA	93
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MlaF E. coli	DNVAYPLREHTQLPAHLTHSTMVMMKLEAVGLRG-AAKLMPSELSCGGMARRAALARAI	162
MlaF R. rickettsii	DNITFTETK---NLSKKEKNDLAGAKLNAVGLSPRILEYPAELSGGMQRRVALARAICST	159
MlaF W. pipientis	ENISFNKYKRRFINDKKAQKLAIEKLSNVGLEENISDMFPILIELSGGMKRRVALARAIAHN	147
MlaF E. ruminantium	ENISFTNFHYRFCNNKNSAREIAASGKLNVLGSLNDVDLRYPIELSGGMKRRVALARAIAIVE	153
MlaF N. moscoviensis	ENVAFPLRERLRMKGAEVTKRVDEKLAQVGLCG-MGHKFPAAELSGGMKRRVALARALVMQ	155
MlaF F. tularensis	DNIAFFPLRKNTNDELKLRINIIVLLKQAQVLAH-TINMMPSELSCGGMARRVALARSIAM	158
MlaF N. gonorrhoeae	DNIAFFPMRELQPEAVIRDLVLLKANAVGLRG-VENLMPSELSCGGMARRVALARTIALD	160
MlaF B. cepacia	ENVAFALREHTDLPDELIRDVLMLKLNNAVGLRG-AVLDMPSEVSCGGMARRVALARAIALD	163
MlaF P. aeruginosa	ENVAFPLRVHTQLPEEMIRDIVMLKLNNAVGLRG-AVELMPDELSCGGMKRRVALARAIALD	162
MlaF L. pneumophila	ENVAFPLREHTELNASMRINIIVMLKLEAVGLRG-AAHLMPAQELSGGMKRRVALARTIALD	159
MlaF A. baumannii	ENVAPPIRAHTKLESNIEAELVALKLESVGLRG-TQLMPTLELSCGGMKRRVALARAIALD	166
MlaF P. luteoviolaceae	DNVAFPLREHTQLSEDILIRDVLMLKLNNAVGLRG-ARELMPAEELSGGMARRAALARAI	163
MlaF H. influenzae	DNVAFPIREHTHPENLIRQIVLMKLEAVGLRG-AAALMPSELSCGGMARRAALARAI	160
MlaF V. cholerae	DNVAYPLREHTEDEAMIKTVLLMLKLEAVGLRG-AAYLMPSELSCGGMARRAALARAI	159
MlaF K. pneumoniae	DNVAYPLREHTHLPALLHTTMVMMKLEAVGLRG-AAKLMPSELSCGGMARRAALARAI	174
Teichoic Acid Exporter A. herbarius	ENIELCKLM-LGFSKKQIKAMEPDIIEFADIFQ-FIDQPVKTYSSGGMKSRIGFAISVND	161
O-Antigen Exporter A. aeolicus	ENIVYNALS-LGLSRREIDKESLIEFSELDL-FINKPLKTYSSGGMIMRAFISIAHDE	160
Maltose Importer E. coli	ENMSFGLKLAGA-KKEVINQRNVQVAEVLQLAH-LLDRKPALKSGGRQRVAIGRTLVAE	151
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MlaF E. coli	PILIMFDEPFVQGDPITMGVLVVKLISELNSALGVTCVVVSHDVEVLISADHWIALDKK	222
MlaF R. rickettsii	PSILFLEDPTEGTGLDPIMANVINELIKIQEEALEATTITITHDMIASAATKEAVAMIYQKG	219
MlaF W. pipientis	PEIIILDEPTEGSLDPIMSINVNEIIMSLSKNLHSTIVTTITHDIYSTFRANKIAVLYEGN	207
MlaF E. ruminantium	PKIIILDEPTEGSLDPIPNDVINDIIVKCHKFKLITITITHDISSAFKIAKTIAYLAGK	213
MlaF N. moscoviensis	PEIILFDEPTEGSLDPIMAKSIHDLITSTQRTQFTGTAVMVSHIEPIEIFGISDYVAMLKQKC	218
MlaF F. tularensis	PDIMIMDEPFTGQDPASPANKLELITLINESLNMTSIIVSHDIQELSISDHIIVGNK	215
MlaF N. gonorrhoeae	PEIMLYDEPFTGLDPIISLGVIAHLISRVNKALRSTSIVMTHDIEKSLIVDQVIFLAHGE	220
MlaF B. cepacia	PQLIMYDEPFTAGLDPIISLGITANLIRTLNEALGATSILVTHDVPESAIFAADIYVFLANG	223
MlaF P. aeruginosa	PQLIMYDEPFVQGDPITMGVLVRLIRLLNDALGITSIVSHDLAETAISTADYIYVGDGR	222
MlaF L. pneumophila	PVLMMYDEPFTGQDPISMGVLVRLIQRLNQLLHTTTIIVSHDVEETCSADYIYVLSGGK	219
MlaF A. baumannii	PDLIMYDEPFTAGQDPISMGVLVRLIRLSREALDLTTIIVSHDVEPTLSADIYIVVAEGK	226
MlaF P. luteoviolaceae	PELIMYDEPFTAGQDPISMGVLVRLIRLSREALDLTTIIVSHDVEPTLSADIYIVVAEGK	223
MlaF H. influenzae	PDLIMFDEPFTGQDPISMGVLSILKRLNEALNLTISIVVSHDVEEVLSTADYAYIIDQK	219
MlaF V. cholerae	PELIMYDEPFVQGDPITMGVLVRLIRLLNDALGITSIVVSHDVEPTLSADIYVLDAGK	220
MlaF K. pneumoniae	PDLIMYDEPFVQGDPITMGVLVRLISELNSLTGVTCIVVSHDVEPTLSADIYIVADKK	224
Teichoic Acid Exporter A. herbarius	PDVLVIDEALSVDGQDTFADKDLKMN-EFKERKGTTFIFSHISIQGVKSCEKALMEYLEGE	230
O-Antigen Exporter A. aeolicus	PECFIIDQALAVGDAHQKQKCFRLK-EHKQKGGSIIPVSHDMNAVKILCDRAILLHKE	219
Maltose Importer E. coli	PSVFLDLPELNSLDALRVMQMRIESRLHKRLGRMTIYVTHDQVEAMTLADKIVVLDAGR	113
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MlaF E. coli	IVAHSQAQALQANPDPRVRQFLDIADGVPVFRYPAGDYH-ADLLPGS----	269
MlaF R. rickettsii	IKWYGSKDDMRNSDNPYLKQFINGLTFQIEV-----	251
MlaF W. pipientis	IFHGHTIKIEIQNSNNEYIKKFIAPVQFMS-----	236
MlaF E. ruminantium	IIVCESVQIEKNTDNQVVRNFITHRNY-----	239
MlaF N. moscoviensis	IAAMAPPAEFORTADPEITEIFISVGTGMALPAAPNRR-----	252
MlaF F. tularensis	IIASDSPENIKNSKDQIQNIFLAGK-----PLDYNHNHNDL-EKNFFPKKEILGS	267
MlaF N. gonorrhoeae	IMFGSGPQEMERELDSPWVRQFVGLGADGPVYAIRYPAQTSL-QDQLLG-----	266
MlaF B. cepacia	VLAQGTDPDLRASZDPSVRQFIDGADGVPFFKHYHTSPPLA-ADFLGGGR-A-	273
MlaF P. aeruginosa	VLHGHTPDVLKETDDPRIQRQFKGIPDGVPVFFHPARDYR-ADLLGER-----	269
MlaF L. pneumophila	IIGQGTPEELKRSEPIQIRQFMHGEADGVVFFHPAKPYT-EELLNA-----	265
MlaF A. baumannii	IQGGTPEELQAYASPVKQPLTGSAAEFGVVEYFQSHQAYL-DNEVRP-----	272
MlaF P. luteoviolaceae	VIGSGSPQEMLAHSSPLVQQLPQLGSLDGPVFFHKAAPYE-EELLDGGV-----	271
MlaF H. influenzae	VIAGETSEQLQSLQSDRLRVVQLKLGESDGPVFRFKYPAQDYV-KELFE-----	271
MlaF V. cholerae	VIAGGSFQALRDNPDPRVQQLCGDADGVPVFRFPQAQPIE-QELFSAK-----	267
MlaF K. pneumoniae	IVAHSQAQSLRENTDPRVRQFIDGIADGVPVFRYPAGDYH-HDLLPGS----	282
Teichoic Acid Exporter A. herbarius	VRGYVTVAEIIIPQYKFLKEYRMSDKERQYKERVMRKQQGEFLQAAYK-----	270
O-Antigen Exporter A. aeolicus	IEEGSPETVTVQAQYKL-----	236
Maltose Importer E. coli	VAQVQGFLELHYHPAD-----	277