

flia

PAO1 MTAASGVRMYSKAQAQNSQEQLIQRYAPLVKRIAYHLLGRLPASVQVEDLMQAGMIGLLE 60
148 -----MYSKAQAQNSQEQLIQRYAPLVKRIAYHLLGRLPASVQVEDLMQAGMIGLLE 52
ID4365 -----MYSKAQAQNSQEQLIQRYAPLVKRIAYHLLGRLPASVQVEDLMQAGMIGLLE 52
IGB83 -----MYSKAQAQNSQEQLIQRYAPLVKRIAYHLLGRLPASVQVEDLMQAGMIGLLE 52
M10 -----MYSKAQAQNSQEQLIQRYAPLVKRIAYHLLGRLPASVQVEDLMQAGMIGLLE 52

PAO1 AAKKYDAGKGFETYAGIRIRGAMLEVRKGDWAPRSVHRNTRMVTDAIRAIEARTGRD 120
148 AAKKYDAGKGFETYAGIRIRGAMLEVRKGDWAPRSVHRNTRMVTDAIRAIEARTGRD 112
ID4365 AAKKYDAGKGFETYAGIRIRGAMLEVRKGDWAPRSVHRNTRMVTDAIRAIEARTGRD 112
IGB83 AAKKYDAGKGFETYAGIRIRGAMLEVRKGDWAPRSVHRNTRMVTDAIRAIEARTGRD 112
M10 AAKKYDAGKGFETYAGIRIRGAMLEVRKGDWAPRSVHRNTRMVTDAIRAIEARTGRD 112

PAO1 AKDHEVAEELQSLLEDYYGILSDTQGSRLYSFDDLLQDGEHGLPEDTSLSHNEPIHGLLD 180
148 AKDHEVAEELQSLLEDYYGILSDTQGSRLYSFDDLLQDGEHGLPEDTSLSHNEPIHGLLD 172
ID4365 AKDHEVAEELQSLLEDYYGILSDTQGSRLYSFDDLLQDGEHGLPEDTSLSHNEPIHGLLD 172
IGB83 AKDHEVAEELQSLLEDYYGILSDTQGSRLYSFDDLLQDGEHGLPEDTSLSHNEPIHGLLD 172
M10 AKDHEVAEELQSLLEDYYGILSDTQGSRLYSFDDLLQDGEHGLPEDTSLSHNEPIHGLLD 172

PAO1 ERFQALADAI AKLPERERLVLALYDEELNLKEIGEVLVSESRVSQLHSQCAARLRAR 240
148 ERFQALADAI AKLPERERLVLALYDEELNLKEIGEVLVSESRVSQLHSQCAARLRAR 232
ID4365 ERFQALADAI AKLPERERLVLALYDEELNLKEIGEVLVSESRVSQLHSQCAARLRAR 232
IGB83 ERFQALADAI AKLPERERLVLALYDEELNLKEIGEVLVSESRVSQLHSQCAARLRAR 232
M10 ERFQALADAI AKLPERERLVLALYDEELNLKEIGEVLVSESRVSQLHSQCAARLRAR 232

PAO1 LADWRS A 247
148 LADWRS A 239
ID4365 LADWRS A 239
IGB83 LADWRS A 239
M10 LADWRS G 239

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PAO1 -----MALTVNTNIAASLNTQRNLNASSNDLNTSLQRLTTG 35
M10 -----MALTVNTNIAASLNTQRNLNASSNDLNTSLQRLTTG 35
IGB83 MGHLKQKAEERSQAQVTEIGPLEEITMALT VNTNIAASLNTQRNLNASSNDLNTSLQRLTTG 60
ID4365 MGHLKQKAEERSQAQVTEIGPLEEITMALT VNTNIAASLNTQRNLNASSNDLNTSLQRLTTG 60
148 -----MALTVNTNIAASLNTQRNLNASSNDLNTSLQRLSTG 35

PAO1 YRINSAKDDAAGLQISNRLSNQISGLNVATRNANDGISLAQTAEGALQOSTNIIQRIRDL 95
M10 YRINSAKDDAAGLQISNRLSNQISGLNVATRNANDGISLAQTAEGALQOSTNIIQRIRDL 95
IGB83 YRINSAKDDAAGLQISNRLSNQISGLNVATRNANDGISLAQTAEGALQOSTNIIQRIRDL 120
ID4365 YRINSAKDDAAGLQISNRLSNQISGLNVATRNANDGISLAQTAEGALQOSTNIIQRIRDL 120
148 SRINSAKDDAAGLQIANRLTSQVGNLVATKNANDGISLAQTAEGALQOSTNIIQRMRDL 95

PAO1 ALQSAANGSNSDADRAALQKEVAQAQELTRISDTTTFGGRKLLDGSFGTTSFQVGSNAYE 155
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IGB83 ALQSAANGSNSDADRAALQKEVAQAQELTRISDTTTFGGRKLLDGSFGTTSFQVGSNAYE 180
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148 SLQSAANGSNSDSERTALNGEVKQLQKELDRISNTTTFGGRKLLDGSFGVASFQVGSAAANE 155

PAO1 TIDISLQNASASAI GSYQVGSNGAGTVASVAGTATASGIASGT VNLVGGGQVKN-IAIAA 214
M10 TIDISLQNASASAI GSYQVGSNGAGTVASVAGTATASGIASGT VNLVGGGQVKN-IAIAA 214
IGB83 TIDISLQNASASAI GSYQVGSNGAGTVASVAGTATASGIASGT VNLVGGGQVKN-IAIAA 239
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148 IISVGI DEMSAESLNGTYFTATGGGAVA----AATASGTVDIAIGITGGS AVNVKVD MKG 211

PAO1 GDSAKAIAEKMDGAI PNLSARARTVFTADVSGVTGGSLNFDVTVGSNTVSLAGVTSTQDL 274
M10 GDSAKAIAEKMDGAI PNLSARARTVFTADVSGVTGGSLNFDVTVGSNTVSLAGVTSTQDL 274
IGB83 GDSAKAIAEKMDGAI PNLSARARTVFTADVSGVTGGSLNFDVTVGSNTVSLAGVTSTQDL 299
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148 NETAEQA AAKIAAAV-----

PAO1 ADQLNSNSSKLGITAS INDKGVLTI TSATGENVKFGAQTGTATAGQVAVKVQGS DKGFEA 334
M10 ADQLNSNSSKLGITAS INDKGVLTI TSATGENVKFGAQTGTATAGQVAVKVQGS DKGFEA 334
IGB83 ADQLNSNSSKLGITAS INDKGVLTI TSATGENVKFGAQTGTATAGQVAVKVQGS DKGFEA 359
ID4365 ADQLNSNSSKLGITAS INDKGVLTI TSATGENVKFGAQTGTATAGQVAVKVQGS DKGFEA 359
148 -----NDANVGI GAF TDGAQI SYVSKAS-----ADGTTSAVSGVAITDTGSTG---- 269

PAO1 AAKNVVAAGTAATTTIVTGYVQLNSPTAYSVSGTGTQASQVFGNASAAQKSSVASVDIST 394

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fliE

PA01 MSQGVFNRRLMELMRSMQMEAMAKAKPVQAPAEVGFAPSFSEMLSQAVDKVNETQQASTAM 60
 148 MSQGVFNRRLMELMRSMQMEAMAKAKPVQAPAEVGFAPSFSEMLSQAVDKVNETQQASTAM 60
 ID4365 MSQGVFNRRLMELMRSMQMEAMAKAKPVQAPAEVGFAPSFSEMLSQAVDKVNETQQASTAM 60
 M10 MSQGVFNRRLMELMRSMQMEAMAKAKPVQAPAEVGFAPSFSEMLSQAVDKVNETQQASTAM 60
 IGB83 MSQGVFNRRLMELMRSMQMEAMAKAKPVQAPAEVGFAPSFSEMLSQAVDKVNETQQASTAM 60

PA01 ANAFEVGQSGVDLTDVMIASQKASVSFQAMTQVRNKLQAYQDIMQMPV 109
 148 ANAFEVGQSGVDLTDVMIASQKASVSFQAMTQVRNKLQAYQDIMQMPV 109
 ID4365 ANAFEVGQSGVDLTDVMIASQKASVSFQAMTQVRNKLQAYQDIMQMPV 109
 M10 ANAFEVGQSGVDLTDVMIASQKASVSFQAMTQVRNKLQAYQDIMQMPV 109
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PA01 MADALIDSQVPAKSGGAGMLKKSFPGLSFLDNLSEMTMLRQIGLLVGLAASVAIGFAVVL 60
 148 MADALIDSQVPAKSGGAGMLKKSFPGLSFLDNLSEMTMLRQIGLLVGLAASVAIGFAVVL 60
 ID4365 MADALIDSQVPAKSGGAGMLKKSFPGLSFLDNLSEMTMLRQIGLLVGLAASVAIGFAVVL 60
 M10 MADALIDSQVPAKSGGAGMLKKSFPGLSFLDNLSEMTMLRQIGLLVGLAASVAIGFAVVL 60
 IGB83 MADALIDSQVPAKSGGAGMLKKSFPGLSFLDNLSEMTMLRQIGLLVGLAASVAIGFAVVL 60

PA01 WSQQPDYKPLYGSLNGVDANRVVEALTAADIPYKVEPNSGALLVKADDLGRARMKVASAG 120
 148 WSQQPDYKPLYGSLNGVDANRVVEALTAADIPYKVEPNSGALLVKADDLGRARMKVASAG 120
 ID4365 WSQQPDYKPLYGSLNGVDANRVVEALTAADIPYKVEPNSGALLVKADDLGRARMKVASAG 120
 M10 WSQQPDYKPLYGSLNGVDANRVVEALTAADIPYKVEPNSGALLVKADDLGRARMKVASAG 120
 IGB83 WSQQPDYKPLYGSLNGVDANRVVEALTAADIPYKVEPNSGALLVKADDLGRARMKVASAG 120

PA01 VAPTNNVGFELDKQALGTSQFMEATNYRRGLEGELARTVSSLNNVKAARVHLAIPKS 180
 148 VAPTNNVGFELDKQALGTSQFMEATNYRRGLEGELARTVSSLNNVKAARVHLAIPKS 180
 ID4365 VAPTNNVGFELDKQALGTSQFMEATNYRRGLEGELARTVSSLNNVKAARVHLAIPKS 180
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 IGB83 VAPTNNVGFELDKQALGTSQFMEATNYRRGLEGELARTVSSLNNVKAARVHLAIPKS 180

PA01 SVFVRDRKPSASVLELYPGRSLEPSQVMAIVNLVATSVPELDSQVTVVDQKGNLLSD 240
 148 SVFVRDRKPSASVLELYPGRSLEPSQVMAIVNLVATSVPELDSQVTVVDQKGNLLSD 240
 ID4365 SVFVRDRKPSASVLELYPGRSLEPSQVMAIVNLVATSVPELDSQVTVVDQKGNLLSD 240
 M10 SVFVRDRKPSASVLELYPGRSLEPSQVMAIVNLVATSVPELDSQVTVVDQKGNLLSD 240
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PA01 QQELSELTMAGKQDFTRRMEGLLTQRVHNILOPVLGNGRYKAEVSADVDFSAVESTSEM 300
 148 QQELSELTMAGKQDFTRRMEGLLTQRVHNILOPVLGNGRYKAEVSADVDFSAVESTSEM 300
 ID4365 QQELSELTMAGKQDFTRRMEGLLTQRVHNILOPVLGNGRYKAEVSADVDFSAVESTSEM 300
 M10 QQELSELTMAGKQDFTRRMEGLLTQRVHNILOPVLGNGRYKAEVSADVDFSAVESTSEM 300
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 148 YNPDQALRSEQRNNEERQNSSGPGVPGALSNQPPGPASAPQATASAPADYVAPGQPL 360
 ID4365 YNPDQALRSEQRNNEERQNSSGPGVPGALSNQPPGPASAPQATASAPADYVAPGQPL 360
 M10 YNPDQALRSEQRNNEERQNSSGPGVPGALSNQPPGPASAPQATASAPADYVAPGQPL 360
 IGB83 YNPDQALRSEQRNNEERQNSSGPGVPGALSNQPPGPASAPQATASAPADYVAPGQPL 360

PA01 KDANGQTIIDPKTGKPELAPYPTDKRDQTRNYELDRSISYTKQQGRLRRLSVAVVLDD 420
 148 KDANGQTIIDPKTGKPELAPYPTDKRDQTRNYELDRSISYTKQQGRLRRLSVAVVLDD 420
 ID4365 KDANGQTIIDPKTGKPELAPYPTDKRDQTRNYELDRSISYTKQQGRLRRLSVAVVLDD 420
 M10 KDANGQTIIDPKTGKPELAPYPTDKRDQTRNYELDRSISYTKQQGRLRRLSVAVVLDD 420
 IGB83 KDANGQTIIDPKTGKPELAPYPTDKRDQTRNYELDRSISYTKQQGRLRRLSVAVVLDD 420

PA01 QMKVDAKTGEVSHQPWSADELARFTRLVQDSVGYDASRGDSVSVINAPFAPAQAEIDS I 480
 148 QMKVDAKTGEVSHQPWSADELARFTRLVQDSVGYDASRGDSVSVINAPFAPAQAEIDS I 480
 ID4365 QMKVDAKTGEVSHQPWSADELARFTRLVQDSVGYDASRGDSVSVINAPFAPAQAEIDS I 480
 M10 QMKVDAKTGEVSHQPWSADELARFTRLVQDSVGYDASRGDSVSVINAPFAPAQAEIDS I 480
 IGB83 QMKVDAKTGEVSHQPWSADELARFTRLVQDSVGYDASRGDSVSVINAPFAPAQAEIDS I 480

PA01 PFYSQPWFWDIVKQVLGVLFILVLFVGVLRPVLVSNITGGGKGS LAGGGGRDGLALGES 540
 148 PFYSQPWFWDIVKQVLGVLFILVLFVGVLRPVLVSNITGGGKGS LAGGGGRDGLALGES 540
 ID4365 PFYSQPWFWDIVKQVLGVLFILVLFVGVLRPVLVSNITGGGKGS LAGGGGRDGLALGES 540
 M10 PFYSQPWFWDIVKQVLGVLFILVLFVGVLRPVLVSNITGGGKGS LAGGGGRDGLALGES 540
 IGB83 PFYSQPWFWDIVKQVLGVLFILVLFVGVLRPVLVSNITGGGKGS LAGGGGRDGLALGES 540

PA01 GLEGLADDRVSIGGPSSILLPSPTTEGYDAQLNAIKNLVAQDPGRVAQVVKWINADE 598
148 GLEGLADDRVSIGGPSSILLPSPTTEGYDAQLNAIKNLVAQDPGRVAQVVKWINADE 598
ID4365 GLEGLADDRVSIGGPSSILLPSPTTEGYDAQLNAIKNLVAQDPGRVAQVVKWINADE 598
M10 GLEGLADDRVSIGGPSSILLPSPTTEGYDAQLNAIKNLVAQDPGRVAQVVKWINADE 598
IGB83 GLEGLADDRVSIGGPSSILLPSPTTEGYDAQLNAIKNLVAQDPGRVAQVVKWINADE 598

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PA01 MSENRLAAKLTQVVKAAIILLSLGETDAAQVLRHMGPKEVQVRVGVAMASMRNVHREQVEQ 60
148 MSENRLAAKLTQVVKAAIILLSLGETDAAQVLRHMGPKEVQVRVGVAMASMRNVHREQVEQ 60
ID4365 MSENRLAAKLTQVVKAAIILLSLGETDAAQVLRHMGPKEVQVRVGVAMASMRNVHREQVEQ 60
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IGB83 MSENRLAAKLTQVVKAAIILLSLGETDAAQVLRHMGPKEVQVRVGVAMASMRNVHREQVEQ 60

PA01 VMGEFVEVVDQTSLVGVGADGYIRKMLTQALGEDKANNLIDRILLGGSTSGLDSLKWMEP 120
148 VMGEFVEVVDQTSLVGVGADGYIRKMLTQALGEDKANNLIDRILLGGSTSGLDSLKWMEP 120
ID4365 VMGEFVEVVDQTSLVGVGADGYIRKMLTQALGEDKANNLIDRILLGGSTSGLDSLKWMEP 120
M10 VMGEFVEVVDQTSLVGVGADGYIRKMLTQALGEDKANNLIDRILLGGSTSGLDSLKWMEP 120
IGB83 VMGEFVEVVDQTSLVGVGADGYIRKMLTQALGEDKANNLIDRILLGGSTSGLDSLKWMEP 120

PA01 RAVADVIRYEHPIQAIIVVAYLDPDQAAEVLSHFDHKVRLDIVLRVSSLNTVQPSALKEL 180
148 RAVADVIRYEHPIQAIIVVAYLDPDQAAEVLSHFDHKVRLDIVLRVSSLNTVQPSALKEL 180
ID4365 RAVADVIRYEHPIQAIIVVAYLDPDQAAEVLSHFDHKVRLDIVLRVSSLNTVQPSALKEL 180
M10 RAVADVIRYEHPIQAIIVVAYLDPDQAAEVLSHFDHKVRLDIVLRVSSLNTVQPSALKEL 180
IGB83 RAVADVIRYEHPIQAIIVVAYLDPDQAAEVLSHFDHKVRLDIVLRVSSLNTVQPSALKEL 180

PA01 NLILEKQFAGNSNATRTTMGGVKRAADIMNYLDSSIEGQLMDSIREVDEDLGQIEDLMF 240
148 NLILEKQFAGNSNATRTTMGGVKRAADIMNYLDSSIEGQLMDSIREVDEDLGQIEDLMF 240
ID4365 NLILEKQFAGNSNATRTTMGGVKRAADIMNYLDSSIEGQLMDSIREVDEDLGQIEDLMF 240
M10 NLILEKQFAGNSNATRTTMGGVKRAADIMNYLDSSIEGQLMDSIREVDEDLGQIEDLMF 240
IGB83 NLILEKQFAGNSNATRTTMGGVKRAADIMNYLDSSIEGQLMDSIREVDEDLGQIEDLMF 240

PA01 VFDNLADVDDRGIQALLREVSSDVLVLAALKGSDEAIREKVFKNMSKRAAELLRDDLEAKG 300
148 VFDNLADVDDRGIQALLREVSSDVLVLAALKGSDEAIREKVFKNMSKRAAELLRDDLEAKG 300
ID4365 VFDNLADVDDRGIQALLREVSSDVLVLAALKGSDEAIREKVFKNMSKRAAELLRDDLEAKG 300
M10 VFDNLADVDDRGIQALLREVSSDVLVLAALKGSDEAIREKVFKNMSKRAAELLRDDLEAKG 300
IGB83 VFDNLADVDDRGIQALLREVSSDVLVLAALKGSDEAIREKVFKNMSKRAAELLRDDLEAKG 300

PA01 PVRVSEVEGAQKEILTIARRMAESGDIVLGGKGEEMI 338
148 PVRVSEVEGAQKEILTIARRMAESGDIVLGGKGEEMI 338
ID4365 PVRVSEVEGAQKEILTIARRMAESGDIVLGGKGEEMI 338
M10 PVRVSEVEGAQKEILTIARRMAESGDIVLGGKGEEMI 338
IGB83 PVRVSEVEGAQKEILTIARRMAESGDIVLGGKGEEMI 338

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PA01 MRLERTSFARLEGYTEAVSLPAQPVEGRLLRMVGLTLEAEGQAQVGSRCNVINESGY 60
148 MRLERTSFARLEGYTEAVSLPAQPVEGRLLRMVGLTLEAEGQAQVGSRCNVINESGY 60
ID4365 MRLERTSFARLEGYTEAVSLPAQPVEGRLLRMVGLTLEAEGQAQVGSRCNVINESGY 60
M10 MRLERTSFARLEGYTEAVSLPAQPVEGRLLRMVGLTLEAEGQAQVGSRCNVINESGY 60
IGB83 MRLERTSFARLEGYTEAVSLPAQPVEGRLLRMVGLTLEAEGQAQVGSRCNVINESGY 60

PA01 HPVQVEAEVMGFSGSKVYLMFVGSGLAGIAPGARVVPLPDTGRLPMGMSMLGRVLDGAGRA 120
148 HPVQVEAEVMGFSGSKVYLMFVGSGLAGIAPGARVVPLPDTGRLPMGMSMLGRVLDGAGRA 120
ID4365 HPVQVEAEVMGFSGSKVYLMFVGSGLAGIAPGARVVPLPDTGRLPMGMSMLGRVLDGAGRA 120
M10 HPVQVEAEVMGFSGSKVYLMFVGSGLAGIAPGARVVPLPDTGRLPMGMSMLGRVLDGAGRA 120
IGB83 HPVQVEAEVMGFSGSKVYLMFVGSGLAGIAPGARVVPLPDTGRLPMGMSMLGRVLDGAGRA 120

PA01 LDGKGMRAEDWVPMDGPTINPLKRHPISEPLDVGIRSINGLLTVGRGQRLGLFAGTGVG 180
148 LDGKGMRAEDWVPMDGPTINPLKRHPISEPLDVGIRSINGLLTVGRGQRLGLFAGTGVG 180
ID4365 LDGKGMRAEDWVPMDGPTINPLKRHPISEPLDVGIRSINGLLTVGRGQRLGLFAGTGVG 180
M10 LDGKGMRAEDWVPMDGPTINPLKRHPISEPLDVGIRSINGLLTVGRGQRLGLFAGTGVG 180
IGB83 LDGKGMRAEDWVPMDGPTINPLKRHPISEPLDVGIRSINGLLTVGRGQRLGLFAGTGVG 180

PA01 KSVLLGMMTRFRTRADIIVVGLIGERGREVKEFIDEILGEEGLKRSVVVASPADDAPLMRL 240
148 KSVLLGMMTRFRTRADIIVVGLIGERGREVKEFIDEILGEEGLKRSVVVASPADDAPLMRL 240
ID4365 KSVLLGMMTRFRTRADIIVVGLIGERGREVKEFIDEILGEEGLKRSVVVASPADDAPLMRL 240
M10 KSVLLGMMTRFRTRADIIVVGLIGERGREVKEFIDEILGEEGLKRSVVVASPADDAPLMRL 240
IGB83 KSVLLGMMTRFRTRADIIVVGLIGERGREVKEFIDEILGEEGLKRSVVVASPADDAPLMRL 240

PA01 RAAQYCTRIAEYFRDKGNVLLMDSLTRYAQAQREIALAIGEPATKGYPPSVFAKLPK 300
148 RAAQYCTRIAEYFRDKGNVLLMDSLTRYAQAQREIALAIGEPATKGYPPSVFAKLPK 300
ID4365 RAAQYCTRIAEYFRDKGNVLLMDSLTRYAQAQREIALAIGEPATKGYPPSVFAKLPK 300

M10 RAAQYCTRIAEYFRDKGNVLLMDSLTRYAQAQREIALAIGEPATKGYPPSVFAKLPK 300
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PA01 LVERAGNAEAGGGSITAFYTVLSEGGDDQDDPIADAARGVLDGHFVLSRRLAEEGHYPAID 360
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PA01 IEASISRVMPQVVEAEHLRDAQRFKQLWSRYQQSRDLISVGAYVAGGDPETDLAIARFPV 420
148 IEASISRVMPQVVEAEHLRDAQRFKQLWSRYQQSRDLISVGAYVAGGDPETDLAIARFPV 420
ID4365 IEASISRVMPQVVEAEHLRDAQRFKQLWSRYQQSRDLISVGAYVAGGDPETDLAIARFPV 420
M10 IEASISRVMPQVVEAEHLRDAQRFKQLWSRYQQSRDLISVGAYVAGGDPETDLAIARFPV 420
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PA01 MRQFLRQGLDESESLAESRARLASLLAGGQA 451
148 MRQFLRQGLDESESLAESRARLASLLAGGQA 451
ID4365 MRQFLRQGLDESESLAESRARLASLLAGGQA 451
M10 MRQFLRQGLDESESLAESRARLASLLAGGQA 451
IGB83 MRQFLRQGLDESESLAESRARLASLLAGGQA 451

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IGB83 MEKRAARLAPVDDMASKAERDAATQLGRCQQQLLAAQKLAELERYRNDYQQQWISQGQK 60
M10 MEKRAARLAPVDDMASKAERDAATQLGRCQQQLLAAQKLAELERYRNDYQQQWISQGQK 60
PA01 MEKRAARLAPVDDMASKAERDAATQLGRCQQQLLAAQKLAELERYRNDYQQQWISQGQK 60
148 MEKRAARLAPVDDMASKAERDAATQLGRCQQQLLAAQKLAELERYRNDYQQQWISQGQK 60
ID4365 MEKRAARLAPVDDMASKAERDAATQLGRCQQQLLAAQKLAELERYRNDYQQQWISQGQK 60

IGB83 GVSGQWLMNYQRFLSQLETAVAQQANSVTWHREAVDKARLNWQERYARLEGLRKLVERYL 120
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148 GVSGQWLMNYQRFLSQLETAVAQQANSVTWHREAVDKARLNWQERYARLEGLRKLVERYL 120
ID4365 GVSGQWLMNYQRFLSQLETAVAQQANSVTWHREAVDKARLNWQERYARLEGLRKLVERYL 120

IGB83 EEARQAEDKREKQKQLELAQRTRRQDD 147
M10 EEARQAEDKREKQKQLELAQRTRRQDD 147
PA01 EEARQAEDKREKQKQLELAQRTRRQDD 147
148 EEARQAEDKREKQKQLELAQRTRRQDD 147
ID4365 EEARQAEDKREKQKQLELAQRTRRQDD 147

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PA01 MAVQDLLSQDEIDALLHGVDGLVETEVEATPGSVKSYDLTSQDRIVRGRMPTLEMINER 60
148 MAVQDLLSQDEIDALLHGVDGLVETEVEATPGSVKSYDLTSQDRIVRGRMPTLEMINER 60
ID4365 MAVQDLLSQDEIDALLHGVDGLVETEVEATPGSVKSYDLTSQDRIVRGRMPTLEMINER 60
M10 MAVQDLLSQDEIDALLHGVDGLVETEVEATPGSVKSYDLTSQDRIVRGRMPTLEMINER 60
IGB83 MAVQDLLSQDEIDALLHGVDGLVETEVEATPGSVKSYDLTSQDRIVRGRMPTLEMINER 60

PA01 FARYTRISMFNLLRRSADVAVGGVQVMKFGEYVHSLYVPTSLNLVKMKPLRGTAFLDA 120
148 FARYTRISMFNLLRRSADVAVGGVQVMKFGEYVHSLYVPTSLNLVKMKPLRGTAFLDA 120
ID4365 FARYTRISMFNLLRRSADVAVGGVQVMKFGEYVHSLYVPTSLNLVKMKPLRGTAFLDA 120
M10 FARYTRISMFNLLRRSADVAVGGVQVMKFGEYVHSLYVPTSLNLVKMKPLRGTAFLDA 120
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PA01 KLVFKLVDNFFGGDGRHAKIEGREFTPTTELVRVMVLEQAFVDLKEAWQAVLEMNFEYVN 180
148 KLVFKLVDNFFGGDGRHAKIEGREFTPTTELVRVMVLEQAFVDLKEAWQAVLEMNFEYVN 180
ID4365 KLVFKLVDNFFGGDGRHAKIEGREFTPTTELVRVMVLEQAFVDLKEAWQAVLEMNFEYVN 180
M10 KLVFKLVDNFFGGDGRHAKIEGREFTPTTELVRVMVLEQAFVDLKEAWQAVLEMNFEYVN 180
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PA01 SEVNPAMANIVSPSEVVVSTFHIELDGGGGDLHITMPYSMIEPIREMLDAGFQSDHDDQ 240
148 SEVNPAMANIVSPSEVVVSTFHIELDGGGGDLHITMPYSMIEPIREMLDAGFQSDHDDQ 240
ID4365 SEVNPAMANIVSPSEVVVSTFHIELDGGGGDLHITMPYSMIEPIREMLDAGFQSDHDDQ 240
M10 SEVNPAMANIVSPSEVVVSTFHIELDGGGGDLHITMPYSMIEPIREMLDAGFQSDHDDQ 240
IGB83 SEVNPAMANIVSPSEVVVSTFHIELDGGGGDLHITMPYSMIEPIREMLDAGFQSDHDDQ 240

PA01 DERWIKALREDVLDVQVPLGATVRRQLKLRDILHMOPGDVIPVEMPEHMVMRANGVPAF 300
148 DERWIKALREDVLDVQVPLGATVRRQLKLRDILHMOPGDVIPVEMPEHMVMRANGVPAF 300
ID4365 DERWIKALREDVLDVQVPLGATVRRQLKLRDILHMOPGDVIPVEMPEHMVMRANGVPAF 300
M10 DERWIKALREDVLDVQVPLGATVRRQLKLRDILHMOPGDVIPVEMPEHMVMRANGVPAF 300
IGB83 DERWIKALREDVLDVQVPLGATVRRQLKLRDILHMOPGDVIPVEMPEHMVMRANGVPAF 300

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PA01 KVKLGAHKGNLALQILEAVERSR 323
148 KVKLGAHKGNLALQILEAVERSR 323
ID4365 KVKLGAHKGNLALQILEAVERSR 323
M10 KVKLGAHKGNLALQILEAVERSR 323
IGB83 KVKLGAHKGNLALQILEAVERSR 323

fliN

PA01 MADEEKVTTTEQALADEWAAALAEAGDASQDDIDALMAQGGATPVAEPSTPRAPMEEFGA 60
148 MADEEKVTTTEQALADEWAAALAEAGDASQDDIDALMAQGGATPVAEPSTPRAPMEEFGA 60
ID4365 MADEEKVTTTEQALADEWAAALAEAGDASQDDIDALMAQGGATPVAEPSTPRAPMEEFGA 60
M10 MADEEKVTTTEQALADEWAAALAEAGDASQDDIDALMAQGGATPVAEPSTPRAPMEEFGA 60
IGB83 MADEEKVTTTEQALADEWAAALAEAGDASQDDIDALMAQGGATPVAEPSTPRAPMEEFGA 60

PA01 SPKAPTISGLEGNLDVILDIPVTISMEVGHTDISIRNLLQLNQGSVIELDRDLAGEPLDV 120
148 SPKAPTISGLEGNLDVILDIPVTISMEVGHTDISIRNLLQLNQGSVIELDRDLAGEPLDV 120
ID4365 SPKAPTISGLEGNLDVILDIPVTISMEVGHTDISIRNLLQLNQGSVIELDRDLAGEPLDV 120
M10 SPKAPTISGLEGNLDVILDIPVTISMEVGHTDISIRNLLQLNQGSVIELDRDLAGEPLDV 120
IGB83 SPKAPTISGLEGNLDVILDIPVTISMEVGHTDISIRNLLQLNQGSVIELDRDLAGEPLDV 120

PA01 LVNGTLIAHGEVVVNEKFGIRLTDVISPSEIKKLR 157
148 LVNGTLIAHGEVVVNEKFGIRLTDVISPSEIKKLR 157
ID4365 LVNGTLIAHGEVVVNEKFGIRLTDVISPSEIKKLR 157
M10 LVNGTLIAHGEVVVNEKFGIRLTDVISPSEIKKLR 157
IGB83 LVNGTLIAHGEVVVNEKFGIRLTDVISPSEIKKLR 157

flio

IGB83 MRRYLFAGFLPALASLSAPLCAAEGTTGAAAPTVAASGAAQLAQLVGLGLVIGLIFL 60
M10 MRRYLFAGFLPALASLSAPLCAAEGTTGAAAPTVAASGAAQLAQLVGLGLVIGLIFL 60
ID4365 MRRYLFAGFLPALASLSAPLCAAEGTTGAAAPTVAASGAAQLAQLVGLGLVIGLIFL 60
PA01 MRRYLFAGFLPALASLSAPLCAAEGTTGAAAPTVAASGAAQLAQLVGLGLVIGLIFL 60
148 MRRYLFAGFLPALASLSAPLCAAEGTTGAAAPTVAASGAAQLAQLVGLGLVIGLIFL 60

IGB83 LAWLVRVQQAGPRGNRLIRTLASQPLGPRDRLVVLVQVGEQIILGLTPGRITPLHVLKE 120
M10 LAWLVRVQQAGPRGNRLIRTLASQPLGPRDRLVVLVQVGEQIILGLTPGRITPLHVLKE 120
ID4365 LAWLVRVQQAGPRGNRLIRTLASQPLGPRDRLVVLVQVGEQIILGLTPGRITPLHVLKE 120
PA01 LAWLVRVQQAGPRGNRLIRTLASQPLGPRDRLVVLVQVGEQIILGLTPGRITPLHVLKE 120
148 LAWLVRVQQAGPRGNRLIRTLASQPLGPRDRLVVLVQVGEQIILGLTPGRITPLHVLKE 120

IGB83 PVHLPDGEFATPEFAQRLELLNKDPKPKP 150
M10 PVHLPDGEFATPEFAQRLELLNKDPKPKP 150
ID4365 PVHLPDGEFATPEFAQRLELLNKDPKPKP 150
PA01 PVHLPDGEFATPEFAQRLELLNKDPKPKP 150
148 PIHLPDGEFATPEFAQRLELLNKDPKPKP 150
*:*****

fliP

PA01 MTPRISLAGALAALCLLLLAPWPALAADPTSISAITVTTNGQGQEQEYSVSLQILLIMTAL 60
148 MTPRISLAGALAALCLLLLAPWPALAADPTSISAITVTTNGQGQEQEYSVSLQILLIMTAL 60
ID4365 MTPRISLAGALAALCLLLLAPWPALAADPTSISAITVTTNGQGQEQEYSVSLQILLIMTAL 60
M10 MTPRISLAGALAALCLLLLAPWPALAADPTSISAITVTTNGQGQEQEYSVSLQILLIMTAL 60
IGB83 MTPRISLAGALAALCLLLLAPWPALAADPTSISAITVTTNGQGQEQEYSVSLQILLIMTAL 60

PA01 SFIPAFVMLMSTFTRIIIVFSILRQALGLQSTPSNQVLVGLALFLTMFVMAPVFDKINSQ 120
148 SFIPAFVMLMSTFTRIIIVFSILRQALGLQSTPSNQVLVGLALFLTMFVMAPVFDKINSQ 120
ID4365 SFIPAFVMLMSTFTRIIIVFSILRQALGLQSTPSNQVLVGLALFLTMFVMAPVFDKINSQ 120
M10 SFIPAFVMLMSTFTRIIIVFSILRQALGLQSTPSNQVLVGLALFLTMFVMAPVFDKINSQ 120
IGB83 SFIPAFVMLMSTFTRIIIVFSILRQALGLQSTPSNQVLVGLALFLTMFVMAPVFDKINSQ 120

PA01 ALQPYLNEQIPAQEALQKAEVPLKAFMLAQTRTSDLELFVRLSKRTDIGSPEATPLTILV 180
148 ALQPYLNEQIPAQEALQKAEVPLKAFMLAQTRTSDLELFVRLSKRTDIGSPEATPLTILV 180
ID4365 ALQPYLNEQIPAQEALQKAEVPLKAFMLAQTRTSDLELFVRLSKRTDIGSPEATPLTILV 180
M10 ALQPYLNEQIPAQEALQKAEVPLKAFMLAQTRTSDLELFVRLSKRTDIGSPEATPLTILV 180
IGB83 ALQPYLNEQIPAQEALQKAEVPLKAFMLAQTRTSDLELFVRLSKRTDIGSPEATPLTILV 180

PA01 PAFVTSELKTAFAQIGFMIFIPFLIIDLVSSVLMAMGMMMLSPLIISLPPKIMLFVLVDG 240
148 PAFVTSELKTAFAQIGFMIFIPFLIIDLVSSVLMAMGMMMLSPLIISLPPKIMLFVLVDG 240
ID4365 PAFVTSELKTAFAQIGFMIFIPFLIIDLVSSVLMAMGMMMLSPLIISLPPKIMLFVLVDG 240
M10 PAFVTSELKTAFAQIGFMIFIPFLIIDLVSSVLMAMGMMMLSPLIISLPPKIMLFVLVDG 240
IGB83 PAFVTSELKTAFAQIGFMIFIPFLIIDLVSSVLMAMGMMMLSPLIISLPPKIMLFVLVDG 240

PA01 WALIIGTLAGSFGTV 255
148 WALIIGTLAGSFGTV 255
ID4365 WALIIGTLAGSFGTV 255
M10 WALIIGTLAGSFGTV 255
IGB83 WALIIGTLAGSFGTV 255

fliq

PA01 MTPEVALDLFREALWLTAMIVGVLVPSLLVGLVVAMFQAATQINEQTL SFLPRLMVILL 60
148 MTPEVALDLFREALWLTAMIVGVLVPSLLVGLVVAMFQAATQINEQTL SFLPRLMVILL 60
ID4365 MTPEVALDLFREALWLTAMIVGVLVPSLLVGLVVAMFQAATQINEQTL SFLPRLMVILL 60
M10 MTPEVALDLFREALWLTAMIVGVLVPSLLVGLVVAMFQAATQINEQTL SFLPRLMVILL 60
IGB83 MTPEVALDLFREALWLTAMIVGVLVPSLLVGLVVAMFQAATQINEQTL SFLPRLMVILL 60

PA01 TLIVLGPWLLRQLMEYTQT LIGNIPLLIG 89
148 TLIVLGPWLLRQLMEYTQT LIGNIPLLIG 89
ID4365 TLIVLGPWLLRQLMEYTQT LIGNIPLLIG 89
M10 TLIVLGPWLLRQLMEYTQT LIGNIPLLIG 89
IGB83 TLIVLGPWLLRQLMEYTQT LIGNIPLLIG 89

fliR

ID4365 MLEL TNAQIGGWIASFVLP LFRVAALLMTPVIGTQLV PVRVRYLALGVCVVLVPNLPP 60
IGB83 MLEL TNAQIGGWIASFVLP LFRVAALLMTPVIGTQLV PVRVRYLALGVCVVLVPNLPP 60
148 MLEL TNAQIGGWIASFVLP LFRVAALLMTPVIGTQLV PVRVRYLALGVCVVLVPNLPP 60
PA01 MLEL TNAQIGGWIASFVLP LFRVAALLMTPVIGTQLV PVRVRYLALGVCVVLVPNLPS 60
M10 MLEL TNAQIGGWIASFVLP LFRVAALLMTPVIGTQLV PVRVRYLALGVCVVLVPNLPS 60

ID4365 MPQVDALSMKAMLLIGE QILVGALLGFSLQLLFHAFV IAGQIISMOMGLGFASMVDPANG 120
IGB83 MPQVDALSMKAMLLIGE QILVGALLGFSLQLLFHAFV IAGQIISMOMGLGFASMVDPANG 120
148 MPQVDALSMKAMLLIGE QILVGALLGFSLQLLFHAFV IAGQIISMOMGLGFASMVDPANG 120
PA01 MPQVDALSMKAMLLIGE QILVGALLGFSLQLLFHAFV IAGQIISMOMGLGFASMVDPANG 120
M10 MPQVDALSMKAMLLIGE QILVGALLGFSLQLLFHAFV IAGQIISMOMGLGFASMVDPANG 120

ID4365 VSVVPLGQFF TMLVTLLFLAMNGHLVVFEVIAESFV TLPVGEGLSGNHFVIIAGKLGWVM 180
IGB83 VSVVPLGQFF TMLVTLLFLAMNGHLVVFEVIAESFV TLPVGEGLSGNHFVIIAGKLGWVM 180
148 VSVVPLGQFF TMLVTLLFLAMNGHLVVFEVIAESFV TLPVGEGLSGNHFVIIAGKLGWVM 180
PA01 VSVVPLGQFF TMLVTLLFLAMNGHLVVFEVIAESFV TLPVGEGLSGNHFVIIAGKLGWVM 180
M10 VSVVPLGQFF TMLVTLLFLAMNGHLVVFEVIAESFV TLPVGEGLSGNHFVIIAGKLGWVM 180

ID4365 GAALLLALPAITALLV VNLAFGAMTRAAPQLNIFSI GFPLTLVLGLVILWIGTADLLSQY 240
IGB83 GAALLLALPAITALLV VNLAFGAMTRAAPQLNIFSI GFPLTLVLGLVILWIGTADLLSQY 240
148 GAALLLALPAITALLV VNLAFGAMTRAAPQLNIFSI GFPLTLVLGLVILWIGTADLLSQY 240
PA01 GAALLLALPAITALLV VNLAFGAMTRAAPQLNIFSI GFPLTLVLGLVILWIGTADLLSQY 240
M10 GAALLLALPAITALLV VNLAFGAMTRAAPQLNIFSI GFPLTLVLGLVILWIGTADLLSQY 240

ID4365 QVLAGEALQFLRELVR AK 258
IGB83 QVLAGEALQFLRELVR AK 258
148 QVLAGEALQFLRELVR AK 258
PA01 QVLAGEALQFLRELVR AK 258
M10 QVLAGEALQFLRELVR AK 258

flgB

PA01 MSISFDRALGIHQALS FRAQRAEVLANNLANADTP NYKARDLDFAAVLAEQDKAAKGT 60
148 MSISFDRALGIHQALS FRAQRAEVLANNLANADTP NYKARDLDFAAVLAEQDKAAKGT 60
ID4365 MSISFDRALGIHQALS FRAQRAEVLANNLANADTP NYKARDLDFAAVLAEQDKAAKGT 60
M10 MSISFDRALGIHQALS FRAQRAEVLANNLANADTP NYKARDLDFAAVLAEQDKAAKGT 60
IGB83 MSISFDRALGIHQALS FRAQRAEVLANNLANADTP NYKARDLDFAAVLAEQDKAAKGT 60

PA01 FATR TTNERHIAAEGFGMGE GSLQYRIPVQPSIDQNTV DAEQANYAENAMHFQASFTF 120
148 FATR TTNERHIAAEGFGMGE GSLQYRIPVQPSIDQNTV DAEQANYAENAMHFQASFTF 120
ID4365 FATR TTNERHIAAEGFGMGE GSLQYRIPVQPSIDQNTV DAEQANYAENAMHFQASFTF 120
M10 FATR TTNERHIAAEGFGMGE GSLQYRIPVQPSIDQNTV DAEQANYAENAMHFQASFTF 120
IGB83 FATR TTNERHIAAEGFGMGE GSLQYRIPVQPSIDQNTV DAEQANYAENAMHFQASFTF 120

PA01 LNSKFKGLVSALRGE 135
148 LNSKFKGLVSALRGE 135
ID4365 LNSKFKGLVSALRGE 135
M10 LNSKFKGLVSALRGE 135
IGB83 LNSKFKGLVSALRGE 135

flgC

PA01 MSLSAVFNIAGSGMSAQSTRLNTVASNIANAETVSSSDKTYRARHPVFSMTFQQAQGDS 60
148 MSLSAVFNIAGSGMSAQSTRLNTVASNIANAETVSSSDKTYRARHPVFSMTFQQAQGDS 60
ID4365 MSLSAVFNIAGSGMSAQSTRLNTVASNIANAETVSSSDKTYRARHPVFSMTFQQAQGDS 60
M10 MSLSAVFNIAGSGMSAQSTRLNTVASNIANAETVSSSDKTYRARHPVFSMTFQQAQGDS 60
IGB83 MSLSAVFNIAGSGMSAQSTRLNTVASNIANAETVSSSDKTYRARHPVFSMTFQQAQGDS 60

PA01 GSLFADQDSSGAGVQVLGIVEDQSSSLMPRYEPNHPAADANGYVYYPNVNVVEEMADMISA 120
148 GSLFADQDSSGAGVQVLGIVEDQSSSLMPRYEPNHPAADANGYVYYPNVNVVEEMADMISA 120
ID4365 GSLFADQDSSGAGVQVLGIVEDQSSSLMPRYEPNHPAADANGYVYYPNVNVVEEMADMISA 120
M10 GSLFADQDSSGAGVQVLGIVEDQSSSLMPRYEPNHPAADANGYVYYPNVNVVEEMADMISA 120
IGB83 GSLFADQDSSGAGVQVLGIVEDQSSSLMPRYEPNHPAADANGYVYYPNVNVVEEMADMISA 120

PA01 SRAFQTNAEMMNTAKQMMQKVLTLGQ 146
148 SRAFQTNAEMMNTAKQMMQKVLTLGQ 146
ID4365 SRAFQTNAEMMNTAKQMMQKVLTLGQ 146
M10 SRAFQTNAEMMNTAKQMMQKVLTLGQ 146
IGB83 SRAFQTNAEMMNTAKQMMQKVLTLGQ 146

flgD

PA01 MSIDNVSGTSSNTGNVNGSKRAAGSGATETGQSVKGSNLGKDEFLKLLVAQLKNQDPMS 60
148 MSIDNVSGTSSNTGNVNGSKRAAGSGATETGQSVKGSNLGKDEFLKLLVAQLKNQDPMS 60
IGB83 MSIDNVSGTSSNTGNVNGSKRAAGSGATETGQSVKGSNLGKDEFLKLLVAQLKNQDPMS 60
M10 MSIDNVSGTSSNTGNVNGSKRAAGSGATETGQSVKGSNLGKDEFLKLLVAQLKNQDPMS 60
ID4365 MSIDNVSGTSSNTGNVNGSKRAAGSGATETGQSVKGSNLGKDEFLKLLVAQLKNQDPMS 60

PA01 PQQNGEFIAQLAQFSTVEGVQSLNKSMSILSNYQSSQALQASSLVGRKVIIVATDKSVVD 120
148 PQQNGEFIAQLAQFSTVEGVQSLNKSMSILSNYQSSQALQASSLVGRKVIIVATDKSVVD 120
IGB83 PQQNGEFIAQLAQFSTVEGVQSLNKSMSILSNYQSSQALQASSLVGRKVIIVATDKSVVD 120
M10 PQQNGEFIAQLAQFSTVEGVQSLNKSMSILSNYQSSQALQASSLVGRKVIIVATDKSVVD 120
ID4365 PQQNGEFIAQLAQFSTVEGVQSLNKSMSILSNYQSSQALQASSLVGRKVIIVATDKSVVD 120

PA01 TKDTPKASLNLVPSSSNVVNVYDDKGTVVNRINLQQAAGSVSFMWDGKSSGNIMPPG 180
148 TKDTPKASLNLVPSSSNVVNVYDDKGTVVNRINLQQAAGSVSFMWDGKSSGNIMPPG 180
IGB83 TKDTPKASLNLVPSSSNVVNVYDDKGTVVNRINLQQAAGSVSFMWDGKSSGNIMPPG 180
M10 TKDTPKASLNLVPSSSNVVNVYDDKGTVVNRINLQQAAGSVSFMWDGKSSGNIMPPG 180
ID4365 TKDTPKASLNLVPSSSNVVNVYDDKGTVVNRINLQQAAGSVSFMWDGKSSGNIMPPG 180

PA01 TYKFEAQTSDGKTYGLQTYLPANVDSVTLGQNGGELMLNLAGLSIALSKVQIIGQ 237
148 TYKFEAQTSDGKTYGLQTYLPANVDSVTLGQNGGELMLNLAGLSIALSKVQIIGQ 237
IGB83 TYKFEAQTSDGKTYGLQTYLPANVDSVTLGQNGGELMLNLAGLSIALSKVQIIGQ 237
M10 TYKFEAQTSDGKTYGLQTYLPANVDSVTLGQNGGELMLNLAGLSIALSKVQIIGQ 237
ID4365 TYKFEAQTSDGKTYGLQTYLPANVDSVTLGQNGGELMLNLAGLSIALSKVQIIGQ 237

flgE

IGB83 MSFNIGLSGIIQAASSGLNVTGNNIANAGTVGFKQSRAEFADVYAASVLGSGSNPQSGSVL 60
M10 MSFNIGLSGIIQAASSGLNVTGNNIANAGTVGFKQSRAEFADVYAASVLGSGSNPQSGSVL 60
PA01 MSFNIGLSGIIQAASSGLNVTGNNIANAGTVGFKQSRAEFADVYAASVLGSGSNPQSGSVL 60
148 MSFNIGLSGIIQAASSGLNVTGNNIANAGTVGFKQSRAEFADVYAASVLGSGSNPQSGSVL 60
ID4365 MSFNIGLSGIIQAASSGLNVTGNNIANAGTVGFKQSRAEFADVYAASVLGSGSNPQSGSVL 60

IGB83 LSDVSMQFKQGNIDSTNSVLDLAINGNGFFVTSNNGAISYTRAGYFNTDKQDFIVDNGY 120
M10 LSDVSMQFKQGNIDSTNSVLDLAINGNGFFVTSNNGAISYTRAGYFNTDKQDFIVDNGY 120
PA01 LSDVSMQFKQGNIDSTNSVLDLAINGNGFFVTSNNGAISYTRAGYFNTDKQDFIVDNGY 120
148 LSDVSMQFKQGNIDSTNSVLDLAINGNGFFVTSNNGAISYTRAGYFNTDKQDFIVDNGY 120
ID4365 LSDVSMQFKQGNIDSTNSVLDLAINGNGFFVTSNNGAISYTRAGYFNTDKQDFIVDNGY 120

IGB83 RLQGYAVGPNGQLQNGVVTDLKVNERANQAPQATSSIQQSYNLNSTLKPPTVTPFPDSDAA 180
M10 RLQGYAVGPNGQLQNGVVTDLKVNERANQAPQATSSIQQSYNLNSTLKPPTVTPFPDSDAA 180
PA01 RLQGYAVGPNGQLQNGVVTDLKVNERANQAPQATSSIQQSYNLNSTLKPPTVTPFPDSDAA 180
148 RLQGYAVGPNGQLQNGVVTDLKVNERANQAPQATSSIQQSYNLNSTLKPPTVTPFPDSDAA 180
ID4365 RLQGYAVGPNGQLQNGVVTDLKVNERANQAPQATSSIQQSYNLNSTLKPPTVTPFPDSDAA 180

IGB83 TYNSSSLGIYDSQGNSHSMTSQFFIKNEPDPNATPPIPENSWTMKVLIDGVNPLDPSNKT 240
M10 TYNSSSLGIYDSQGNSHSMTSQFFIKNEPDPNATPPIPENSWTMKVLIDGVNPLDPSNKT 240
PA01 TYNSSSLGIYDSQGNSHSMTSQFFIKNEPDPNATPPIPENSWTMKVLIDGVNPLDPSNKT 240
148 TYNSSSLGIYDSQGNSHSMTSQFFIKNEPDPNATPPIPENSWTMKVLIDGVNPLDPSNKT 240
ID4365 TYNSSSLGIYDSQGNSHSMTSQFFIKNEPDPNATPPIPENSWTMKVLIDGVNPLDPSNKT 240

IGB83 PMSFNVTFDASGQMTSVRAPDGTSGPGFSDATTNVIQFSPATGNPPTPGTGWIPAASD 300
M10 PMSFNVTFDASGQMTSVRAPDGTSGPGFSDATTNVIQFSPATGNPPTPGTGWIPAASD 300
PA01 PMSFNVTFDASGQMTSVRAPDGTSGPGFSDATTNVIQFSPATGNPPTPGTGWIPAASD 300
148 PMSFNVTFDASGQMTSVRAPDGTSGPGFSDATTNVIQFSPATGNPPTPGTGWIPAASD 300
ID4365 PMSFNVTFDASGQMTSVRAPDGTSGPGFSDATTNVIQFSPATGNPPTPGTGWIPAASD 300

IGB83 GKTTPPTYAWNGATGAASGISFDMRKTQYSTAFAQSNPIQDGYTTGQLAGLEIDDTGVIF 360
M10 GKTTPPTYAWNGATGAASGISFDMRKTQYSTAFAQSNPIQDGYTTGQLAGLEIDDTGVIF 360
PA01 GKTTPPTYAWNGATGAASGISFDMRKTQYSTAFAQSNPIQDGYTTGQLAGLEIDDTGVIF 360
148 GKTTPPTYAWNGATGAASGISFDMRKTQYSTAFAQSNPIQDGYTTGQLAGLEIDDTGVIF 360
ID4365 GKTTPPTYAWNGATGAASGISFDMRKTQYSTAFAQSNPIQDGYTTGQLAGLEIDDTGVIF 360

IGB83 ARYTNGQSKVQGVVLANFANIQGLTPIGKTSWVQSSSEGEPAVGAPRSGLGALQSGAL 420
M10 ARYTNGQSKVQGVVLANFANIQGLTPIGKTSWVQSSSEGEPAVGAPRSGLGALQSGAL 420
PA01 ARYTNGQSKVQGVVLANFANIQGLTPIGKTSWVQSSSEGEPAVGAPRSGLGALQSGAL 420
148 ARYTNGQSKVQGVVLANFANIQGLTPIGKTSWVQSSSEGEPAVGAPRSGLGALQSGAL 420
ID4365 ARYTNGQSKVQGVVLANFANIQGLTPIGKTSWVQSSSEGEPAVGAPRSGLGALQSGAL 420

IGB83 EASNVDISNELVNLIVHQRNYQANAKTIQTEDAVTQTIINLR 462
M10 EASNVDISNELVNLIVHQRNYQANAKTIQTEDAVTQTIINLR 462
PA01 EASNVDISNELVNLIVHQRNYQANAKTIQTEDAVTQTIINLR 462
148 EASNVDISNELVNLIVHQRNYQANAKTIQTEDAVTQTIINLR 462
ID4365 EASNVDISNELVNLIVHQRNYQANAKTIQTEDAVTQTIINLR 462

flgF

PA01 MDKMLYVSMGASQNTLAMRAHANNLANISTSGFRDRFEQARSMQVFGDSFPPARVFMSE 60
148 MDKMLYVSMGASQNTLAMRAHANNLANISTSGFRDRFEQARSMQVFGDSFPPARVFMSE 60
ID4365 MDKMLYVSMGASQNTLAMRAHANNLANISTSGFRDRFEQARSMQVFGDSFPPARVFMSE 60
M10 MDKMLYVSMGASQNTLAMRAHANNLANISTSGFRDRFEQARSMQVFGDSFPPARVFMSE 60
IGB83 MDKMLYVSMGASQNTLAMRAHANNLANISTSGFRDRFEQARSMQVFGDSFPPARVFMSE 60

PA01 RPGTDFSHGSLQETGNELDIAIDGDFVAVQAPDGESEAYVRTAGMHIDALGMLRTGDGLP 120
148 RPGTDFSHGSLQETGNELDIAIDGDFVAVQAPDGESEAYVRTAGMHIDALGMLRTGDGLP 120
ID4365 RPGTDFSHGSLQETGNELDIAIDGDFVAVQAPDGESEAYVRTAGMHIDALGMLRTGDGLP 120
M10 RPGTDFSHGSLQETGNELDIAIDGDFVAVQAPDGESEAYVRTAGMHIDALGMLRTGDGLP 120
IGB83 RPGTDFSHGSLQETGNELDIAIDGDFVAVQAPDGESEAYVRTAGMHIDALGMLRTGDGLP 120

PA01 VLGNGGPIAVPPEEKVEIGDGTISIRALGENPNVVAVVDRIKLVNPNLKQMEKGTDGLL 180
148 VLGNGGPIAVPPEEKVEIGDGTISIRALGENPNVVAVVDRIKLVNPNLKQMEKGTDGLL 180
ID4365 VLGNGGPIAVPPEEKVEIGDGTISIRALGENPNVVAVVDRIKLVNPNLKQMEKGTDGLL 180
M10 VLGNGGPIAVPPEEKVEIGDGTISIRALGENPNVVAVVDRIKLVNPNLKQMEKGTDGLL 180
IGB83 VLGNGGPIAVPPEEKVEIGDGTISIRALGENPNVVAVVDRIKLVNPNLKQMEKGTDGLL 180

PA01 HYKQPGEQAPLADANVKVSGFLESSNVNAVEEMTAILSLSRQFELHVKMMRTAEDDSA 240
148 HYKQPGEQAPLADANVKVSGFLESSNVNAVEEMTAILSLSRQFELHVKMMRTAEDDSA 240
ID4365 HYKQPGEQAPLADANVKVSGFLESSNVNAVEEMTAILSLSRQFELHVKMMRTAEDDSA 240
M10 HYKQPGEQAPLADANVKVSGFLESSNVNAVEEMTAILSLSRQFELHVKMMRTAEDDSA 240
IGB83 HYKQPGEQAPLADANVKVSGFLESSNVNAVEEMTAILSLSRQFELHVKMMRTAEDDSA 240

PA01 AMARVLQIS 249
148 AMARVLQIS 249
ID4365 AMARVLQIS 249
M10 AMARVLQIS 249
IGB83 AMARVLQIS 249

flgG

PA01 MLSALWVSKTGLSAQDMNLTISNNLANVSTTGFKRDRAEFQDLYQIRRQPGGQSTQDS 60
148 MLSALWVSKTGLSAQDMNLTISNNLANVSTTGFKRDRAEFQDLYQIRRQPGGQSTQDS 60
ID4365 MLSALWVSKTGLSAQDMNLTISNNLANVSTTGFKRDRAEFQDLYQIRRQPGGQSTQDS 60
M10 MLSALWVSKTGLSAQDMNLTISNNLANVSTTGFKRDRAEFQDLYQIRRQPGGQSTQDS 60
IGB83 MLSALWVSKTGLSAQDMNLTISNNLANVSTTGFKRDRAEFQDLYQIRRQPGGQSTQDS 60

PA01 ELPSGLQLGTGVRVVGVTQKIFTPGSLQTTTEQPLDMAVNRRGFQVLLPDGTVSYTRDGSF 120
148 ELPSGLQLGTGVRVVGVTQKIFTPGSLQTTTEQPLDMAVNRRGFQVLLPDGTVSYTRDGSF 120
ID4365 ELPSGLQLGTGVRVVGVTQKIFTPGSLQTTTEQPLDMAVNRRGFQVLLPDGTVSYTRDGSF 120
M10 ELPSGLQLGTGVRVVGVTQKIFTPGSLQTTTEQPLDMAVNRRGFQVLLPDGTVSYTRDGSF 120
IGB83 ELPSGLQLGTGVRVVGVTQKIFTPGSLQTTTEQPLDMAVNRRGFQVLLPDGTVSYTRDGSF 120

PAO1 HLNSDGQIVTNSNGFALEPAIVVPNETQTFTVGDGTVSVTTGNAQPQVIGNIQTADFIN 180
148 HLNSDGQIVTNSNGFALEPAIVVPNETQTFTVGDGTVSVTTGNAQPQVIGNIQTADFIN 180
ID4365 HLNSDGQIVTNSNGFALEPAIVVPNETQTFTVGDGTVSVTTGNAQPQVIGNIQTADFIN 180
M10 HLNSDGQIVTNSNGFALEPAIVVPNETQTFTVGDGTVSVTTGNAQPQVIGNIQTADFIN 180
IGB83 HLNSDGQIVTNSNGFALEPAIVVPNETQTFTVGDGTVSVTTGNAQPQVIGNIQTADFIN 180

PAO1 PAGLQAIGNNLFLETGSSGAPQVGTPLNGLGTVAQNTLENSNVNVEELVNMITTQRAY 240
148 PAGLQAIGNNLFLETGSSGAPQVGTPLNGLGTVAQNTLENSNVNVEELVNMITTQRAY 240
ID4365 PAGLQAIGNNLFLETGSSGAPQVGTPLNGLGTVAQNTLENSNVNVEELVNMITTQRAY 240
M10 PAGLQAIGNNLFLETGSSGAPQVGTPLNGLGTVAQNTLENSNVNVEELVNMITTQRAY 240
IGB83 PAGLQAIGNNLFLETGSSGAPQVGTPLNGLGTVAQNTLENSNVNVEELVNMITTQRAY 240

PAO1 EMNSKVIISTADQMLSFTQNL 261
148 EMNSKVIISTADQMLSFTQNL 261
ID4365 EMNSKVIISTADQMLSFTQNL 261
M10 EMNSKVIISTADQMLSFTQNL 261
IGB83 EMNSKVIISTADQMLSFTQNL 261

flgH

PAO1 MNRLMIVSLLGIATLGGCVNPPPKPNDPYAPVLPRTPLPAAQNNGAIYQAGFEQNLVD 60
148 MNRLMIVSLLGIATLGGCVNPPPKPNDPYAPVLPRTPLPAAQNNGAIYQAGFEQNLVD 60
ID4365 MNRLMIVSLLGIATLGGCVNPPPKPNDPYAPVLPRTPLPAAQNNGAIYQAGFEQNLVD 60
M10 MNRLMIVSLLGIATLGGCVNPPPKPNDPYAPVLPRTPLPAAQNNGAIYQAGFEQNLVD 60
IGB83 MNRLMIVSLLGIATLGGCVNPPPKPNDPYAPVLPRTPLPAAQNNGAIYQAGFEQNLVD 60

PAO1 DRKAFRVGDIITITLNEKTQASKKANSDIQKDSKTKMGLTSLFGSGMTTNNPIGGDLSL 120
148 DRKAFRVGDIITITLNEKTQASKKANSDIQKDSKTKMGLTSLFGSGMTTNNPIGGDLSL 120
ID4365 DRKAFRVGDIITITLNEKTQASKKANSDIQKDSKTKMGLTSLFGSGMTTNNPIGGDLSL 120
M10 DRKAFRVGDIITITLNEKTQASKKANSDIQKDSKTKMGLTSLFGSGMTTNNPIGGDLSL 120
IGB83 DRKAFRVGDIITITLNEKTQASKKANSDIQKDSKTKMGLTSLFGSGMTTNNPIGGDLSL 120

PAO1 SAEYGGSRDAKGDQAGQSNLSLTSITVTVAEVLNGLSVRGEKWMFLNTGNELVRIAG 180
148 SAEYGGSRDAKGDQAGQSNLSLTSITVTVAEVLNGLSVRGEKWMFLNTGNELVRIAG 180
ID4365 SAEYGGSRDAKGDQAGQSNLSLTSITVTVAEVLNGLSVRGEKWMFLNTGNELVRIAG 180
M10 SAEYGGSRDAKGDQAGQSNLSLTSITVTVAEVLNGLSVRGEKWMFLNTGNELVRIAG 180
IGB83 SAEYGGSRDAKGDQAGQSNLSLTSITVTVAEVLNGLSVRGEKWMFLNTGNELVRIAG 180

PAO1 LVRADDIATDNTVSTRVADARITYSGTGAFADASQPGWDRFFLSPLWPF 231
148 LVRADDIATDNTVSTRVADARITYSGTGAFADASQPGWDRFFLSPLWPF 231
ID4365 LVRADDIATDNTVSTRVADARITYSGTGAFADASQPGWDRFFLSPLWPF 231
M10 LVRADDIATDNTVSTRVADARITYSGTGAFADASQPGWDRFFLSPLWPF 231
IGB83 LVRADDIATDNTVSTRVADARITYSGTGAFADASQPGWDRFFLSPLWPF 231

flgI

PAO1 MTKFKHLLALAALLAAGAAQAERLKDIAIQGVRTNQLIGYGLVVGLSGSGDQTTQTPF 60
148 MTKFKHLLALAALLAAGAAQAERLKDIAIQGVRTNQLIGYGLVVGLSGSGDQTTQTPF 60
ID4365 MTKFKHLLALAALLAAGAAQAERLKDIAIQGVRTNQLIGYGLVVGLSGSGDQTTQTPF 60
M10 MTKFKHLLALAALLAAGAAQAERLKDIAIQGVRTNQLIGYGLVVGLSGSGDQTTQTPF 60
IGB83 MTKFKHLLALAALLAAGAAQAERLKDIAIQGVRTNQLIGYGLVVGLSGSGDQTTQTPF 60

PAO1 TLQTFNNMLAQFGIKVPANVGNVQLKNVAASVHADLPPFAKPGQPIDVTVSSIGNAKSL 120
148 TLQTFNNMLAQFGIKVPANVGNVQLKNVAASVHADLPPFAKPGQPIDVTVSSIGNAKSL 120
ID4365 TLQTFNNMLAQFGIKVPANVGNVQLKNVAASVHADLPPFAKPGQPIDVTVSSIGNAKSL 120
M10 TLQTFNNMLAQFGIKVPANVGNVQLKNVAASVHADLPPFAKPGQPIDVTVSSIGNAKSL 120
IGB83 TLQTFNNMLAQFGIKVPANVGNVQLKNVAASVHADLPPFAKPGQPIDVTVSSIGNAKSL 120

PAO1 RGGSLMTPPLKIDGQVYAVAQGNLVVGGFDAEGRDGSKITVNVPSAGRIPAGATVERAV 180
148 RGGSLMTPPLKIDGQVYAVAQGNLVVGGFDAEGRDGSKITVNVPSAGRIPAGATVERAV 180
ID4365 RGGSLMTPPLKIDGQVYAVAQGNLVVGGFDAEGRDGSKITVNVPSAGRIPAGATVERAV 180
M10 RGGSLMTPPLKIDGQVYAVAQGNLVVGGFDAEGRDGSKITVNVPSAGRIPAGATVERAV 180
IGB83 RGGSLMTPPLKIDGQVYAVAQGNLVVGGFDAEGRDGSKITVNVPSAGRIPAGATVERAV 180

PAO1 PSGFDQGNLSLTLNLRPDTTAKRIVDRINELLPVGAHAVDGGSVRVSAPLDPNQRVDY 240
148 PSGFDQGNLSLTLNLRPDTTAKRIVDRINELLPVGAHAVDGGSVRVSAPLDPNQRVDY 240
ID4365 PSGFDQGNLSLTLNLRPDTTAKRIVDRINELLPVGAHAVDGGSVRVSAPLDPNQRVDY 240
M10 PSGFDQGNLSLTLNLRPDTTAKRIVDRINELLPVGAHAVDGGSVRVSAPLDPNQRVDY 240
IGB83 PSGFDQGNLSLTLNLRPDTTAKRIVDRINELLPVGAHAVDGGSVRVSAPLDPNQRVDY 240

PAO1 LSILENLDVQPEAVAKVIINSRTGTIVIGQNVKVSAAVTHGSLTIVSITEDPIVSQPGA 300
148 LSILENLDVQPEAVAKVIINSRTGTIVIGQNVKVSAAVTHGSLTIVSITEDPIVSQPGA 300

ID4365 LSILENLVDPGEAVAKVIINSRTGTIVIGQNVKVSAAVTHGSLTVSITEDPIVSQPGA 300
M10 LSILENLVDPGEAVAKVIINSRTGTIVIGQNVKVSAAVTHGSLTVSITEDPIVSQPGA 300
IGB83 LSILENLVDPGEAVAKVIINSRTGTIVIGQNVKVSAAVTHGSLTVSITEDPIVSQPGA 300

PA01 FSNQQTAVVPRSRVNAEEETKPMFKFGPGTTLDDIVRAVNQVGAAPSDLMAILEALKQAG 360
148 FSNQQTAVVPRSRVNAEEETKPMFKFGPGTTLDDIVRAVNQVGAAPSDLMAILEALKQAG 360
ID4365 FSNQQTAVVPRSRVNAEEETKPMFKFGPGTTLDDIVRAVNQVGAAPSDLMAILEALKQAG 360
M10 FSNQQTAVVPRSRVNAEEETKPMFKFGPGTTLDDIVRAVNQVGAAPSDLMAILEALKQAG 360
IGB83 FSNQQTAVVPRSRVNAEEETKPMFKFGPGTTLDDIVRAVNQVGAAPSDLMAILEALKQAG 360

PA01 ALQADLIVI 369
148 ALQADLIVI 369
ID4365 ALQADLIVI 369
M10 ALQADLIVI 369
IGB83 ALQADLIVI 369

flgJ

PA01 MDSRLLSGIGAGPDSGSYTDLNRNLQKVGKDRDGEANIRKVAQEFESLFLNEMLKSMRS 60
M10 MDSRLLSGIGAGPDSGSYTDLNRNLQKVGKDRDGEANIRKVAQEFESLFLNEMLKSMRS 60
148 MDSRLLSGIGAGPDSGSYTDLNRNLQKVGKDRDGEANIRKVAQEFESLFLNEMLKSMRS 60
ID4365 MDSRLLSGIGAGPDSGSYTDLNRNLQKVGKDRDGEANIRKVAQEFESLFLNEMLKSMRS 60
IGB83 MDSRLLSGIGAGPDSGSYTDLNRNLQKVGKDRDGEANIRKVAQEFESLFLNEMLKSMRS 60

PA01 ANEALGDGNFMNSQTTKQYQDMYDQQLSVLSKNAGGIGLADVLVRQLSKMKQGSRGNGE 120
M10 ANEALGDGNFMNSQTTKQYQDMYDQQLSVLSKNAGGIGLADVLVRQLSKMKQGSRGNGE 120
148 ANEALGDGNFMNSQTTKQYQDMYDQQLSVLSKNAGGIGLADVLVRQLSKMKQGSRGNGE 120
ID4365 ANEALGDGNFMNSQTTKQYQDMYDQQLSVLSKNAGGIGLADVLVRQLSKMKQGSRGNGE 120
IGB83 ANEALGDGNFMNSQTTKQYQDMYDQQLSVLSKNAGGIGLADVLVRQLSKMKQGSRGNGE 120

PA01 NPFARVAENGAGRWPSPNSAQAGKALPMPEAGRDDSKLLNQRRLALPGKLAERMLAGIVP 180
M10 NPFARVAENGAGRWPSPNSAQAGKALPMPEAGRDDSKLLNQRRLALPGKLAERMLAGIVP 180
148 NPFARVAENGAGRWPSPNSAQAGKALPMPEAGRDDSKLLNQRRLALPGKLAERMLAGIVP 180
ID4365 NPFARVAENGAGRWPSPNSAQAGKALPMPEAGRDDSKLLNQRRLALPGKLAERMLAGIVP 180
IGB83 NPFARVAENGAGRWPSPNSAQAGKALPMPEAGRDDSKLLNQRRLALPGKLAERMLAGIVP 180

PA01 SASPAASQMQLGQDSYLPQSYPAASRRGFSTDGVDGSGSRRIAQPPLARGKSMFASAD 240
M10 SASPAASQMQLGQDSYLPQSYPAASRRGFSTDGVDGSGSRRIAQPPLARGKSMFASAD 240
148 SASPAASQMQLGQDSYLPQSYPAASRRGFSTDGVDGSGSRRIAQPPLARGKSMFASAD 240
ID4365 SASPAASQMQLGQDSYLPQSYPTASRRGFSTDGVDGSGSRRIAQPPLARGKSMFASAD 240
IGB83 SASPAASQMQLGQDSYLPQSYPTASRRGFSTDGVDGSGSRRIAQPPLARGKSMFASAD 240

PA01 EFIATMLPMAQKAAERIGVDARYLVAQAALETGWGKSIIRQQDGGSSHNLFGIKTGSRW 300
M10 EFIATMLPMAQKAAERIGVDARYLVAQAALETGWGKSIIRQQDGGSSHNLFGIKTGSRW 300
148 EFIATMLPMAQKAAERIGVDARYLVAQAALETGWGKSIIRQQDGGSSHNLFGIKTGSRW 300
ID4365 EFIATMLPMAQKAAERIGVDARYLVAQAALETGWGKSIIRQQDGGSSHNLFGIKTGSRW 300
IGB83 EFIATMLPMAQKAAERIGVDARYLVAQAALETGWGKSIIRQQDGGSSHNLFGIKTGSRW 300

PA01 GASARALTTEYEGGKAVKEIAAFRSYSSFEQSFHDYVSFQLGNDRYQNALDSANPERFM 360
M10 GASARALTTEYEGGKAVKEIAAFRSYSSFEQSFHDYVSFQLGNDRYQNALDSANPERFM 360
148 GASARALTTEYEGGKAVKEIAAFRSYSSFEQSFHDYVSFQLGNDRYQNALDSANPERFM 360
ID4365 GASARALTTEYEGGKAVKEIAAFRSYSSFEQSFHDYVSFQLGNDRYQNALDSANPERFM 360
IGB83 GASARALTTEYEGGKAVKEIAAFRSYSSFEQSFHDYVSFQLGNDRYQNALDSANPERFM 360

PA01 QELQRAGYATDPQYARKVAQIARQMOTYQAVAAAGTPPLG 400
M10 QELQRAGYATDPQYARKVAQIARQMOTYQAVAAAGTPPLG 400
148 QELQRAGYATDPQYARKVAQIARQMOTYQAVAAAGTPPLG 400
ID4365 QELQRAGYATDPQYARKVAQIARQMOTYQAVAAAGTPPLG 400
IGB83 QELQRAGYATDPQYARKVAQIARQMOTYQAVAAAGTPPLG 400

flgK

PA01 MSDLLSIGLSGLGTSQTWLTVTGHNITNVKTPGYSRQDAIQOTRIPQFSGAGYMGSGSQI 60
M10 MSDLLSIGLSGLGTSQTWLTVTGHNITNVKTPGYSRQDAIQOTRIPQFSGAGYMGSGSQI 60
IGB83 MSDLLSIGLSGLGTSQTWLTVTGHNITNVKTPGYSRQDAIQOTRIPQFSGAGYMGSGSQI 60
ID4365 MSDLLSIGLSGLGTSQTWLTITGHNITNVKTPGYSRQDAIQOTRIPQFSGAGYMGSGSQI 60
148 MSDLLSIGLSGLGTSQTWLTITGHNITNVKTPGYSRQDAIQOTRIPQFSGAGYMGSGSQI 60

PA01 VDVRRLASDFLTGQLRNATSQNSLNAFLGQIDQLNSLLADNTTGVSPAMQRFFSALQTA 120
M10 VDVRRLASDFLTGQLRNATSQNSLNAFLGQIDQLNSLLADNTTGVSPAMQRFFSALQTA 120
IGB83 VDVRRLASDFLTGQLRNATSQNSLNAFLGQIDQLNSLLADNTTGVSPAMQRFFSALQTA 120
ID4365 VDVRRLASDFLTGQLRNATSQNSLNAFLGQIDQLNSLLADNTTGVSPAMQRFFSALQTA 120

M10 QYKSGITAAKNSLQEEETILNSVGTVIHRIREIAVQAGNGGLDASDKNALATELAQREDE 120
PA01 QYKSGITAAKNSLQEEETILNSVGTVIHRIREIAVQAGNGGLDASDKNALATELAQREDE 120
ID4365 QYKSGITAAKNSLQEEETILNSVGTVIHRIREIAVQAGNGGLDASDKNALATELAQREDE 120
148 QYKTMTEAKNSLQEEETILRSVGNLQRIREIAGQAGDGLDSDNKKSLASELQREDE 120
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IGB83 LLNLLNSRDASGKYLFGSGQDTPFVRNPDGTYSYNGDEGQREVQIASSTFFIAISDNGK 180
M10 LLNLLNSRDASGKYLFGSGQDTPFVRNPDGTYSYNGDEGQREVQIASSTFFIAISDNGK 180
PA01 LLNLLNSRDASGKYLFGSGQDTPFVRNPDGTYSYNGDEGQREVQIASSTFFIAISDNGK 180
ID4365 LLNLLNSRDASGKYLFGSGQDTPFVRNPDGTYSYNGDEGQREVQIASSTFFIAISDNGK 180
148 LLNLLNSRDASGKYLFGSGQSVQPFVRNEDGTYSYMGDESQREVQIASSTRIPVSDSGK 180
*****.*****.***** **.****** *:*:*..*:*:*

IGB83 ILFESGSNANRVSTGKDAAGPDASGNPSSSISLGLVTDKEAYDVFPSSTPPLASDGVG 240
M10 ILFESGSNANRVSTGKDAAGPDASGNPSSSISLGLVTDKEAYDVFPSSTPPLASDGVG 240
PA01 ILFESGSNANRVSTGKDAAGPDASGNPSSSISLGLVTDKEAYDVFPSSTPPLASDGVG 240
ID4365 ILFESGSNANRVSTGKDAAGLDASGNPSSSISLGLVTDKEAYDVFPSSTPPLASDGVG 240
148 VLFEDIVNAARLDT-KAAAG----NTGDGRISVGLVEDELAFFSOPASNPAAATDGFN 234
:*:*.. ** *:*:* * ** * ..*.. **:*:* *:*:* **:*:* **:*:*..

IGB83 IHFTDAKNYVYDLKTIIPGYDWSTSDPNPPSFATLASGKIDDNAQTSDFITFGGVKVI 300
M10 IHFTDAKNYVYDLKTIIPGYDWSTSDPNPPSFATLASGKIDDNAQTSDFITFGGVKVI 300
PA01 IHFTDAKNYVYDLKTIIPGYDWSTSDPNPPSFATLASGKIDDNAQTSDFITFGGVKVI 300
ID4365 IHFTDAKNYVYDLKTIIPGYDWSTSDPNPPSFATLASGKIDDNAQTSDFITFGGVKVI 300
148 IHFVSDKEYVYDPKSLPGYDWTYDPSPPAQWLSKGAIDDDPKTIDKVLVYAGVSVTI 294
***..*:*:* **:*:*:* **.*..*:*..* **:*:*..*:*..* **:*:*..*..*..*

IGB83 DGEPOGGDTFSIKRQPDQEKRSLLNTVSDLRKALLSAEDTPAGNLAIRDAVGVAISNLS 360
M10 DGEPOGGDTFSIKRQPDQEKRSLLNTVSDLRKALLSAEDTPAGNLAIRDAVGVAISNLS 360
PA01 DGEPOGGDTFSIKRQPDQEKRSLLNTVSDLRKALLSAEDTPAGNLAIRDAVGVAISNLS 360
ID4365 DGEPOGGDTFSIKRQPDQEKRSLLNTVSDLRKALLSAEDTPAGNLAIRDAVGVAISNLS 360
148 DGTPKAGDEFVNVYKPGSEKRSLLNVVSDLRKALLESSTDNQAGNDAIRDATAVALTNLSA 354
** *..* ** *:*:* :*..*****.***** *:*..* ** *..*..*..*..*..*..*

IGB83 SNSQILTGQGRIGARMNVAESTETFDVTLVNTAVISQIQDLDYPEALSRLTLQSTIMD 420
M10 SNSQILTGQGRIGARMNVAESTETFDVTLVNTAVISQIQDLDYPEALSRLTLQSTIMD 420
PA01 SNSQILTGQGRIGARMNVAESTETFDVTLVNTAVISQIQDLDYPEALSRLTLQSTIMD 420
ID4365 SNSQILTGQGRIGARMNVAESTETFDVTLVNTAVISQIQDLDYPEALSRLTLQSTIMD 420
148 VAAVDGQGGKIGARLNTVESTETFDVTKLVNASVMSQIQDLDYAEALSRLSLQSTIMD 414
: *:*:*:*:*..*..*****.*****.*****.*****.*****.*****

IGB83 AAQOSFVKIRGLSLFNLYS 439
M10 AAQOSFVKIRGLSLFNLYS 439
PA01 AAQOSFVKIRGLSLFNLYS 439
ID4365 AAQOSFVKIRGLSLFNLYS 439
148 AAQOSYVKIQGLSLFNLYK 433
*****:*:*:*..*****.

flgM

IGB83 MVIDFNRLNPGSTPATTGRTGSTAAGRDPATGADKAGQAATSAPKSGESVQISETAQNMQ 60
M10 MVIDFNRLNPGSTPATTGRTGSTAAGRDPATGADKAGQAATSAPKSGESVQISETAQNMQ 60
ID4365 MVIDFNRLNPGSTPATTGRTGSTAAGRDPATGADKAGQAATSAPKSGESVQISETAQNMQ 60
PA01 MVIDFNRLNPGSTPATTGRTGSTAAGRDPATGADKAGQAATSAPKSGESVQISETAQNMQ 60
148 MVIDFNRLNPGSTPATTGRTGSTAAGRDPATGADKAGQAATSAPKSGESVQISETAQNMQ 60
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IGB83 KVTDLQQLTPVVDNDKVARIKQAIADGTQVDSERVASKLLDFESQR 107
M10 KVTDLQQLTPVVDNDKVARIKQAIADGTQVDSERVASKLLDFESQR 107
ID4365 KVTDLQQLTPVVDNDKVARIKQAIADGTQVDSERVASKLLDFESQR 107
PA01 KVTDLQQLTPVVDNDKVARIKQAIADGTQVDSERVASKLLDFESQR 107
148 KVTDLQQLTPVVDNDKVARIKQAIADGTQVDSERVASKLLDFESQR 107
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flgQ

PA01 MWRETKLLLIDNLDNRDLAVILNFLGEDQLTCNSDWREVAAGLSNSREALCVLLGSV 60
148 MWRETKLLLIDNLDNRDLAVILNFLGEDQLTCNSDWREVAAGLSNSREALCVLLGSV 60
IGB83 MWRETKLLLIDNLDNRDLAVILNFLGEDQLTCNSDWREVAAGLSNSREALCVLLGSV 60
M10 MWRETKLLLIDNLDNRDLAVILNFLGEDQLTCNSDWREVAAGLSNSREALCVLLGSV 60
ID4365 MWRETKLLLIDNLDNRDLAVILNFLGEDQLTCNSDWREVAAGLSNSREALCVLLGSV 60
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PA01 ESKGGAVELLKQLASWDEYLPILLIGEPAPADWPEELRRRVLASLEMPSPYNKLLDSLHR 120
148 ESKGGAVELLKQLASWDEYLPILLIGEPAPADWPEELRRRVLASLEMPSPYNKLLDSLHR 120
IGB83 ESKGGAVELLKQLASWDEYLPILLIGEPAPADWPEELRRRVLASLEMPSPYNKLLDSLHR 120
M10 ESKGGAVELLKQLASWDEYLPILLIGEPAPADWPEELRRRVLASLEMPSPYNKLLDSLHR 120
ID4365 ESKGGAVELLKQLASWDEYLPILLIGEPAPADWPEELRRRVLASLEMPSPYNKLLDSLHR 120
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PA01 AQVYREMYDQARERGRSREPDLFRSLVGTSSRAIQVVRQMMQVADTDASVILGESGTGK 180
148 AQVYREMYDQARERGRSREPDLFRSLVGTSSRAIQVVRQMMQVADTDASVILGESGTGK 180
IGB83 AQVYREMYDQARERGRSREPDLFRSLVGTSSRAIQVVRQMMQVADTDASVILGESGTGK 180

M10 AQVYREMYDQARERGRSREP NLF RSLVGT SRAIQV RQMMQVADTDASV LILGESGTGK 180
ID4365 AQVYREMYDQARERGRSREP NLF RSLVGT SRAIQV RQMMQVADTDASV LILGESGTGK 180

PA01 EVVARNLHYHSKRREGPFV P VNCGAI PAELLESELFGHEKGAF TGAITSRAGR FELANGG 240
148 EVVARNLHYHSKRREGPFV P VNCGAI PAELLESELFGHEKGAF TGAITSRAGR FELANGG 240
IGB83 EVVARNLHYHSKRREGPFV P VNCGAI PAELLESELFGHEKGAF TGAITSRAGR FELANGG 240
M10 EVVARNLHYHSKRREGPFV P VNCGAI PAELLESELFGHEKGAF TGAITSRAGR FELANGG 240
ID4365 EVVARNLHYHSKRREGPFV P VNCGAI PAELLESELFGHEKGAF TGAITSRAGR FELANGG 240

PA01 TLFLDEIGDMPLPMQVKLLRVLQERTFERVGSNK TQNV D VRI IAATHKNLEKMI EDGTFR 300
148 TLFLDEIGDMPLPMQVKLLRVLQERTFERVGSNK TQNV D VRI IAATHKNLEKMI EDGTFC 300
IGB83 TLFLDEIGDMPLPMQVKLLRVLQERTFERVGSNK TQNV D VRI IAATHKNLEKMI EDGTFR 300
M10 TLFLDEIGDMPLPMQVKLLRVLQERTFERVGSNK TQNV D VRI IAATHKNLEKMI EDGTFR 300
ID4365 TLFLDEIGDMPLPMQVKLLRVLQERTFERVGSNK TQNV D VRI IAATHKNLEKMI EDGTFR 300

PA01 EDLYYRLNVFP IEMAPLRERVED IALLLNELI SRMEHEKRGSI RFNSAAIMSLCRHDWPG 360
148 EDLYYRLNVFP IEMAPLRERVED IALLLNELI SRMEHEKRGSI RFNSAAIMSLCRHDWPG 360
IGB83 EDLYYRLNVFP IEMAPLRERVED IALLLNELI SRMEHEKRGSI RFNSAAIMSLCRHDWPG 360
M10 EDLYYRLNVFP IEMAPLRERVED IALLLNELI SRMEHEKRGSI RFNSAAIMSLCRHDWPG 360
ID4365 EDLYYRLNVFP IEMAPLRERVED IALLLNELI SRMEHEKRGSI RFNSAAIMSLCRHDWPG 360

PA01 NVRELANLVERLAIMHPYGVIGV GELPKKFRHV DDEDEQLASSLREELEERAAINAGLPG 420
148 NVRELANLVERLAIMHPYGVIGV GELPKKFRHV DDEDEQLASSLREELEERAAINAGLPG 420
IGB83 NVRELANLVERLAIMHPYGVIGV GELPKKFRHV DDEDEQLASSLREELEERAAINAGLPG 420
M10 NVRELANLVERLAIMHPYGVIGV GELPKKFRHV DDEDEQLASSLREELEERAAINAGLPG 420
ID4365 NVRELANLVERLAIMHPYGVIGV GELPKKFRHV DDEDEQLASSLREELEERAAINAGLPG 420

PA01 MDAPAMLP AEGLDLKD YLANLEQGLIQ QALDDAGGVV ARAAERLIRRTTLVEKMRKYGM 480
148 MDAPAMLP AEGLDLKD YLANLEQGLIQ QALDDAGGVV ARAAERLIRRTTLVEKMRKYGM 480
IGB83 MDAPAMLP AEGLDLKD YLANLEQGLIQ QALDDAGGVV ARAAERLIRRTTLVEKMRKYGM 480
M10 MDAPAMLP AEGLDLKD YLANLEQGLIQ QALDDAGGVV ARAAERLIRRTTLVEKMRKYGM 480
ID4365 MDAPAMLP AEGLDLKD YLANLEQGLIQ QALDDAGGVV ARAAERLIRRTTLVEKMRKYGM 480

PA01 SRRDDLSDD 490
148 SRRDDLSDD 490
IGB83 SRRDDLSDD 490
M10 SRRDDLSDD 490
ID4365 SRRDDLSDD 490

fileR

PA01 MAAKVLVVEDDRALREALSD TLLGGHEFVA VDSAEALPVLAREAFSLV ISDVNMPGMD 60
148 MAAKVLVVEDDRALREALSD TLLGGHEFVA VDSAEALPVLAREAFSLV ISDVNMPGMD 60
IGB83 MAAKVLVVEDDRALREALSD TLLGGHEFVA VDSAEALPVLAREAFSLV ISDVNMPGMD 60
M10 MAAKVLVVEDDRALREALSD TLLGGHEFVA VDSAEALPVLAREAFSLV ISDVNMPGMD 60
ID4365 MAAKVLVVEDDRALREALSD TLLGGHEFVA VDSAEALPVLAREAFSLV ISDVNMPGMD 60

PA01 GHQLLGLIRTRYPHLPVLLMTAYGAVDR AVEAMRQGAADYLVKPF EARALLDLVARHALG 120
148 GHQLLGLIRTRYPHLPVLLMTAYGAVDR AVEAMRQGAADYLVKPF EARALLDLVARHALG 120
IGB83 GHQLLGLIRTRYPHLPVLLMTAYGAVDR AVEAMRQGAADYLVKPF EARALLDLVARHALG 120
M10 GHQLLGLIRTRYPHLPVLLMTAYGAVDR AVEAMRQGAADYLVKPF EARALLDLVARHALG 120
ID4365 GHQLLGLIRTRYPHLPVLLMTAYGAVDR AVEAMRQGAADYLVKPF EARALLDLVARHALG 120

PA01 QLPGSEEDGPVALEPASRQ LLELAARVARSDSTV LISGESGTGKEVLANY IHQQSPRAGK 180
148 QLPGSEEDGPVALEPASRQ LLELAARVARSDSTV LISGESGTGKEVLANY IHQQSPRAGK 180
IGB83 QLPGSEEDGPVALEPASRQ LLELAARVARSDSTV LISGESGTGKEVLANY IHQQSPRAGK 180
M10 QLPGSEEDGPVALEPASRQ LLELAARVARSDSTV LISGESGTGKEVLANY IHQQSPRAGK 180
ID4365 QLPGSEEDGPVALEPASRQ LLELAARVARSDSTV LISGESGTGKEVLANY IHQQSPRAGK 180

PA01 PFIAINCAAIPDNMLEATLFGHEKGSFTG AIAAQPGKFELADGGTILLDEISEMPLGLQA 240
148 PFIAINCAAIPDNMLEATLFGHEKGSFTG AIAAQPGKFELADGGTILLDEISEMPLGLQA 240
IGB83 PFIAINCAAIPDNMLEATLFGHEKGSFTG AIAAQPGKFELADGGTILLDEISEMPLGLQA 240
M10 PFIAINCAAIPDNMLEATLFGHEKGSFTG AIAAQPGKFELADGGTILLDEISEMPLGLQA 240
ID4365 PFIAINCAAIPDNMLEATLFGHEKGSFTG AIAAQPGKFELADGGTILLDEISEMPLGLQA 240

PA01 KLLRVLQEREVERVGARKPINLDIRVLA TTNRD LAAEVAAGR FREDLYRLSVFP LAW RP 300
148 KLLRVLQEREVERVGARKPINLDIRVLA TTNRD LAAEVAAGR FREDLYRLSVFP LAW RP 300
IGB83 KLLRVLQEREVERVGARKPINLDIRVLA TTNRD LAAEVAAGR FREDLYRLSVFP LAW RP 300
M10 KLLRVLQEREVERVGARKPINLDIRVLA TTNRD LAAEVAAGR FREDLYRLSVFP LAW RP 300
ID4365 KLLRVLQEREVERVGARKPINLDIRVLA TTNRD LAAEVAAGR FREDLYRLSVFP LAW RP 300

PA01 LRERPADILPLAERLLRKHRSKMNLGAVALGPEAAQCLVRHAWPGNVRELDNAIQRALIL 360
148 LRERPADILPLAERLLRKHRSKMNLGAVALGPEAAQCLVRHAWPGNVRELDNAIQRALIL 360
IGB83 LRERPADILPLAERLLRKHRSKMNLGAVALGPEAAQCLVRHAWPGNVRELDNAIQRALIL 360
M10 LRERPADILPLAERLLRKHRSKMNLGAVALGPEAAQCLVRHAWPGNVRELDNAIQRALIL 360
ID4365 LRERPADILPLAERLLRKHRSKMNLGAVALGPEAAQCLVRHAWPGNVRELDNAIQRALIL 360

PA01 QQGGLIQPADLCLTAPIGMPLAAPVVPMPAMPPTPPSVEIPSPAAGQDASGALGDDL 420
148 QQGGLIQPADLCLTAPIGMPLA--VVPMPAMPPTPPSVEIPSPAAGQDASGALGDDL 418
IGB83 QQGGLIQPADLCLTAPIGMPLAAPVVPMPAMPPTPPSVEIPSPAAGQDASGALGDDL 420
M10 QQGGLIQPADLCLTAPIGMPLAAPVVPMPAMPPTPPSVEIPSPAAGQDASGALGDDL 420
ID4365 QQGGLIQPADLCLTAPIGMPLAAPVVPMPAMPPTPPSVEIPSPAAGQDATGALGDDL 420
*****;*****
PA01 RREFQVIIDTLRTERGRRKEAERLGISPRTLRYKLAQMRDAGMDVEAYLYAI 473
148 RREFQVIIDTLRTERGRRKEAERLGISPRTLRYKLAQMRDAGMDVEAYLYAI 471
IGB83 RREFQVIIDTLRTERGRRKEAERLGISPRTLRYKLAQMRDAGMDVEAYLYAI 473
M10 RREFQVIIDTLRTERGRRKEAERLGISPRTLRYKLAQMRDAGMDVEAYLYAI 473
ID4365 RREFQVIIDTLRTERGRRKEAERLGISPRTLRYKLAQMRDAGMDVEAYLYAI 473

fileS

PA01 MQPALNAFTEQPADTAEATSRAGLEQAFALFNQMSSQLSESYSLEERVTELKQLALVS 60
148 MQPALNAFTEQPADTAEATSRAGLEQAFALFNQMSSQLSESYSLEERVTELKQLALVS 60
M10 MQPALNAFTEQPADTAEATSRAGLEQAFALFNQMSSQLSESYSLEERVTELKQLALVS 60
ID4365 MQPALNAFTEQPADTAEATSRAGLEQAFALFNQMSSQLSESYSLEERVTELKQLALVS 60
IGB83 MQPALNAFTEQPADTAEATSRAGLEQAFALFNQMSSQLSESYSLEERVTELKQLALVS 60
*****.
PA01 AQRMEELAEKERLANRLQSLDLLPGGVIVI DAHGVVREANPAALGGLGEPVGLWREV 120
148 AQRMEELAEKERLANRLQSLDLLPGGVIVI DAHGVVREANPAALGGLGEPVGLWREV 120
M10 AQRMEELAEKERLANRLQSLDLLPGGVIVI DAHGVVREANPAALGGLGEPVGLWREV 120
ID4365 AQRMEELAEKERLANRLQSLDLLPGGVIVI DAHGVVREANPAALGGLGEPVGLWREV 120
IGB83 AQRMEELAEKERLANRLQSLDLLPGGVIVI DAHGVVREANPAALGGLGEPVGLWREV 120

PA01 IARCFAPREDDGHEISLRDGRRLSIATRSLNGEPGQLILLNDLTDTRRLOEQLARHERLS 180
148 IARCFAPREDDGHEISLRDGRRLSIATRSLNGEPGQLILLNDLTDTRRLOEQLARHERLS 180
M10 IARCFAPREDDGHEISLRDGRRLSIATRSLNGEPGQLILLNDLTDTRRLOEQLARHERLS 180
ID4365 IARCFAPREDDGHEISLRDGRRLSIATRSLNGEPGQLILLNDLTDTRRLOEQLARHERLS 180
IGB83 IARCFAPREDDGHEISLRDGRRLSIATRSLNGEPGQLILLNDLTDTRRLOEQLARHERLS 180

PA01 ALGRMVASLAHQIRTPLSAALLYAGHLEQALPTDQQRFAGRLKERLHELEHQVRDMLV 240
148 ALGRMVASLAHQIRTPLSAALLYAGHLEQALPTDQQRFAGRLKERLHELEHQVRDMLV 240
M10 ALGRMVASLAHQIRTPLSAALLYAGHLEQALPTDQQRFAGRLKERLHELEHQVRDMLV 240
ID4365 ALGRMVASLAHQIRTPLSAALLYAGHLEQALPTDQQRFAGRLKERLHELEHQVRDMLV 240
IGB83 ALGRMVASLAHQIRTPLSAALLYAGHLEQALPTDQQRFAGRLKERLHELEHQVRDMLV 240

PA01 FARGELPLTDRVAPKALFDSLRAAAEVHVQGLQVRWQCEARGGELLCNRDTLVGTVLNLV 300
148 FARGELPLTDRVAPKALFDSLRAAAEVHVQGLQVRWQCEARGGELLCNRDTLVGTVLNLV 300
M10 FARGELPLTDRVAPKALFDSLRAAAEVHVQGLQVRWQCEARGGELLCNRDTLVGTVLNLV 300
ID4365 FARGELPLTDRVAPKALFDSLRAAAEVHVQGLQVRWQCEARGGELLCNRDTLVGTVLNLV 300
IGB83 FARGELPLTDRVAPKALFDSLRAAAEVHVQGLQVRWQCEARGGELLCNRDTLVGTVLNLV 300

PA01 ENAIQACGPELRLKVHLYARADSLRLSVSDNGPGMDPATLARLGEFFFTTKTTGTGLGLA 360
148 ENAIQACGPELRLKVHLYARADSLRLSVSDNGPGMDPATLARLGEFFFTTKTTGTGLGLA 360
M10 ENAIQACGPELRLKVHLYARADSLRLSVSDNGPGMDPATLARLGEFFFTTKTTGTGLGLA 360
ID4365 ENAIQACGPELRLKVHLYARADSLRLSVSDNGPGMDPATLARLGEFFFTTKTTGTGLGLA 360
IGB83 ENAIQACGPELRLKVHLYARADSLRLSVSDNGPGMDPATLARLGEFFFTTKTTGTGLGLA 360

PA01 VVKAVARAHQGLQLRSRPGRGTCATLILPLIPAAPLSAIE 402
148 VVKAVARAHQGLQLRSRPGRGTCATLILPLIPAAPLSAIE 402
M10 VVKAVARAHQGLQLRSRPGRGTCATLILPLIPAAPLSAIE 402
ID4365 VVKAVARAHQGLQLRSRPGRGTCATLILPLIPAAPLSAIE 402
IGB83 VVKAVARAHQGLQLRSRPGRGTCATLILPLIPAAPLSAIE 402

fileN

PA01 MKQMGSMHPVQVIAVTGGKGGVGTNNVSNLALALADLGRVMLLDADLGLANVDVLLGL 60
148 MKQMGSMHPVQVIAVTGGKGGVGTNNVSNLALALADLGRVMLLDADLGLANVDVLLGL 60
ID4365 ---MGSMHPVQVIAVTGGKGGVGTNNVSNLALALADLGRVMLLDADLGLANVDVLLGL 57
M10 MKQMGSMHPVQVIAVTGGKGGVGTNNVSNLALALADLGRVMLLDADLGLANVDVLLGL 60
IGB83 MKQMGSMHPVQVIAVTGGKGGVGTNNVSNLALALADLGRVMLLDADLGLANVDVLLGL 60

PA01 TPKRTLADVIEGRCELRDVLLGPGGVRIVPAASGTQSMVHLSPMQHAGLIQAFSDISDN 120
148 TPKRTLADVIEGRCELRDVLLGPGGVRIVPAASGTQSMVHLSPMQHAGLIQAFSDISDN 120

ID4365 TPKRTLADVIEGRCELRDVLLLGPGGVRIVPAASGTQSMVHLSPMQHAGLIQAFSDISDN 117
M10 TPKRTLADVIEGRCELRDVLLLGPGGVRIVPAASGTQSMVHLSPMQHAGLIQAFSDISDN 120
IGB83 TPKRTLADVIEGRCELRDVLLLGPGGVRIVPAASGTQSMVHLSPMQHAGLIQAFSDISDN 120

PAO1 LDVLLVDDTAAGIGDSVSVFVRAAQEVLLVVCDEPTSIDAYALIKLLNRDHGMTRFRVLA 180
148 LDVLLVDDTAAGIGDSVSVFVRAAQEVLLVVCDEPTSIDAYALIKLLNRDHGMTRFRVLA 180
ID4365 LDVLLVDDTAAGIGDSVSVFVRAAQEVLLVVCDEPTSIDAYALIKLLNRDHGMTRFRVLA 177
M10 LDVLLVDDTAAGIGDSVSVFVRAAQEVLLVVCDEPTSIDAYALIKLLNRDHGMTRFRVLA 180
IGB83 LDVLLVDDTAAGIGDSVSVFVRAAQEVLLVVCDEPTSIDAYALIKLLNRDHGMTRFRVLA 180

PAO1 NMAHSPQEGRNLFAKLTKVTDRLDVALQYVGVIPYDESVRKAVQKQRAVYEAFFPRSKAS 240
148 NMAHSPQEGRNLFAKLTKVTDRLDVALQYVGVIPYDESVRKAVQKQRAVYEAFFPRSKAS 240
ID4365 NMAHSPQEGRNLFAKLTKVTDRLDVALQYVGVIPYDESVRKAVQKQRAVYEAFFPRSKAS 237
M10 NMAHSPQEGRNLFAKLTKVTDRLDVALQYVGVIPYDESVRKAVQKQRAVYEAFFPRSKAS 240
IGB83 NMAHSPQEGRNLFAKLTKVTDRLDVALQYVGVIPYDESVRKAVQKQRAVYEAFFPRSKAS 240

PAO1 LAFKAVAQKVDSWPLPANPRGHLEFFVERLVQHPATGSAV 280
148 LAFKAVAQKVDSWPLPANPRGHLEFFVERLVQHPATGSAV 280
ID4365 LAFKAVAQKVDSWPLPANPRGHLEFFVERLVQHPATGSAV 277
M10 LAFKAVAQKVDSWPLPANPRGHLEFFVERLVQHPATGSAV 280
IGB83 LAFKAVAQKVDSWPLPANPRGHLEFFVERLVQHPATGSAV 280

motA

IGB83 MSKIIGIIVVFASVLGGFLLSGGKIGAI IQPFEVLIIGGAALGAFLOSNPGSTFMVVLKK 60
M10 MSKIIGIIVVFASVLGGFLLSGGKIGAI IQPFEVLIIGGAALGAFLOSNPGSTFMVVLKK 60
PAO1 MSKIIGIIVVFASVLGGFLLSGGKIGAI IQPFEVLIIGGAALGAFLOSNPGSTFMVVLKK 60
148 MSKIIGIIVVFASVLGGFLLSGGKIGAI IQPFEVLIIGGAALGAFLOSNPGSTFMVVLKK 60
ID4365 MSKIIGIIVVFASVLGGFLLSGGKIGAI IQPFEVLIIGGAALGAFLOSNPGSTFMVVLKK 60

IGB83 APKMFSNRFTQTYYLEVLGMLYEILNKSRRREGMMAIEADIEDPAASPIFSKYPGVLKDER 120
M10 APKMFSNRFTQTYYLEVLGMLYEILNKSRRREGMMAIEADIEDPAASPIFSKYPGVLKDER 120
PAO1 APKMFSNRFTQTYYLEVLGMLYEILNKSRRREGMMAIEADIEDPAASPIFSKYPGVLKDER 120
148 APKMFSNRFTQTYYLEVLGMLYEILNKSRRREGMMAIEADIEDPAASPIFSKYPGVLKDER 120
ID4365 APKMFSNRFTQTYYLEVLGMLYEILNKSRRREGMMAIEADIEDPAASPIFSKYPGVLKDER 120

IGB83 MTAYVCDYLIRIMSSGNMAPHELEGLFDMELSSLKEDLEHPSHAVTKVADALPGFGIVA AV 180
M10 MTAYVCDYLIRIMSSGNMAPHELEGLFDMELSSLKEDLEHPSHAVTKVADALPGFGIVA AV 180
PAO1 MTAYVCDYLIRIMSSGNMAPHELEGLFDMELSSLKEDLEHPSHAVTKVADALPGFGIVA AV 180
148 MTAYVCDYLIRIMSSGNMAPHELEGLFDMELSSLKEDLEHPSHAVTKVADALPGFGIVA AV 180
ID4365 MTAYVCDYLIRIMSSGNMAPHELEGLFDMELSSLKEDLEHPSHAVTKVADALPGFGIVA AV 180

IGB83 LGIVITMALLGEGSQAEIGHHVAAALVGTFLGILAAAYGFVGPLAGALEHDAKEELNLF EA 240
M10 LGIVITMALLGEGSQAEIGHHVAAALVGTFLGILAAAYGFVGPLAGALEHDAKEELNLF EA 240
PAO1 LGIVITMALLGEGSQAEIGHHVAAALVGTFLGILAAAYGFVGPLAGALEHDAKEELNLF EA 240
148 LGIVITMALLGEGSQAEIGHHVAAALVGTFLGILAAAYGFVGPLAVALEHDAKEELNMF EA 240
ID4365 LGIVITMALLGEGSQAEIGHHVAAALVGTFLGILAAAYGFVGPLAVALEHDAKEELNMF EA 240

IGB83 IKACLVASASGMPPSLAVEFGRKVLLPAHRPTFAELEQAVRGR 283
M10 IKACLVASASGMPPSLAVEFGRKVLLPAHRPTFAELEQAVRGR 283
PAO1 IKACLVASASGMPPSLAVEFGRKVLLPAHRPTFAELEQAVRGR 283
148 IKACLVASASGMPPSLAVEFGRKVLLPAHRPTFAELEQAVRGR 283
ID4365 IKACLVASASGMPPSLAVEFGRKVLLPAHRPTFAELEQAVRGR 283

motB

PAO1 MDNNQPIIVKRVKRYAAGHHGGSWKIAFADFATAMMAFFLVWLSSATPEQKKAISGYF 60
148 MDNNQPIIVKRVKRYAAGHHGGSWKIAFADFATAMMAFFLVWLSSATPEQKKAISGYF 60
IGB83 MDNNQPIIVKRVKRYAAGHHGGSWKIAFADFATAMMAFFLVWLSSATPEQKKAISGYF 60
M10 MDNNQPIIVKRVKRYAAGHHGGSWKIAFADFATAMMAFFLVWLSSATPEQKKAISGYF 60
ID4365 MDNNQPIIVKRVKRYAAGHHGGSWKIAFADFATAMMAFFLVWLSSATPEQKKAISGYF 60

PAO1 QDPIGFSESASPYVIDLGGTPTPAPDKTLNPQVQAQPDNSNESRISPEQDHQVNADQAENL 120
148 QDPIGFSESASPYVIDLGGTPTPAPDKTLNPQVQAQPDNSNESRISPEQDHQVNADQAENL 120
IGB83 QDPIGFSESASPYVIDLGGTPTPAPDKTLNPQVQAQPDNSNESRISPEQDHQVNADQAENL 120
M10 QDPIGFSESASPYVIDLGGTPTPAPDKTLNPQVQAQPDNSNESRISPEQDHQVNADQAENL 120
ID4365 QDPIGFSESASPYVIDLGGTPTPAPDKTLNPQVQAQPDNSNESRISPEQDHQVNADQAENL 120

PAO1 AEQVERERLALLLQELQNKVDENPMLKDFKQIHFEITRDGLRIQIVDAANRPMFDLGS A 180
148 AEQVERERLALLLQELQNKVDENPMLKDFKQIHFEITRDGLRIQIVDAANRPMFDLGS A 180
IGB83 AEQVERERLALLLQELQNKVDENPMLKDFKQIHFEITRDGLRIQIVDAANRPMFDLGS A 180
M10 AEQVERERLALLLQELQNKVDENPMLKDFKQIHFEITRDGLRIQIVDAANRPMFDLGS A 180

ID4365 AEQVERERLALLQELQNKVDENPMLKDFKDIHFEITRDGLRIQIVDAANRPMFDLGS 180

PA01 RLQPYFEDILLAMAETIRQVPNKISISGHTDAKPYAGNGDFGNWELSANRANAARRALVA 240
148 RLQPYFEDILLAMAETIRQVPNKISISGHTDAKPYAGNGDFGNWELSANRANAARRALVA 240
IGB83 RLQPYFEDILLAMAETIRQVPNKISISGHTDAKPYAGNGDFGNWELSANRANAARRALVA 240
M10 RLQPYFEDILLAMAETIRQVPNKISISGHTDAKPYAGNGDFGNWELSANRANAARRALVA 240
ID4365 RLQPYFEDILLAMAETIRQVPNKISISGHTDAKPYAGNGDFGNWELSANRANAARRALVA 240

PA01 GGYPEGQIAQVVGYSARLFDKDPNPNVRRIDIVVLTRKAQKAI EGETGAPEASAPAA 300
148 GGYPEGQIAQVVGYSARLFDKDPNPNVRRIDIVVLTRKAQKAI EGETGAPEASAPAA 300
IGB83 GGYPEGQIAQVVGYSARLFDKDPNPNVRRIDIVVLTRKAQKAI EGETGAPEASAPAA 300
M10 GGYPEGQIAQVVGYSARLFDKDPNPNVRRIDIVVLTRKAQKAI EGETGAPEASAPAA 300
ID4365 GGYPEGQIAQVVGYSARLFDKDPNPNVRRIDIVVLTRKAQKAI EGETGAPEASAPAA 300

PA01 APGEPKPAEAPAAGAQPSPADEVQKKNLFDGGSCLKLEQIKGD 347
148 APGEPKPAEAPAAGAQPSPADEVQKKNLFDGGSCLKLEQIKGD 347
IGB83 APGEPKPAEAPAAGAQPSPADEVQKKNLFDGGSCLKLEQIKGD 347
M10 APGEPKPAEAPAAGAQPSPADEVQKKNLFDGGSCLKLEQIKGD 347
ID4365 APGEPKPAEAPAAGAQPSPADEVQKKNLFDGGSCLKLEQIKGD 347

motC

IGB83 MDVLSLVGIIILAFVAIVGGNFLEGGHAGALLNGPAALIVIGGTLAAALLQTPVNVLKRGL 60
M10 MDVLSLVGIIILAFVAIVGGNFLEGGHAGALLNGPAALIVIGGTLAAALLQTPVNVLKRGL 60
ID4365 MDVLSLVGIIILAFVAIVGGNFLEGGHAGALLNGPAALIVIGGTLAAALLQTPVNVLKRGL 60
PA01 MDVLSLVGIIILAFVAIVGGNFLEGGHAGALLNGPAALIVIGGTLAAALLQTPVNVLKRGL 60
148 -----MPCSTAALIVIGGTLAAALLQTPVNVLKRGL 32

IGB83 GMLGWVFFPPREDLSSGIDRIVSWSMTARKEGLLGLESIAEAEPDPYARKGLQLLVDGAE 120
M10 GMLGWVFFPPREDLSSGIDRIVSWSMTARKEGLLGLESIAEAEPDPYARKGLQLLVDGAE 120
ID4365 GMLGWVFFPPREDLSSGIDRIVSWSMTARKEGLLGLESIAEAEPDPYARKGLQLLVDGAE 120
PA01 GMLGWVFFPPREDLSSGIDRIVSWSMTARKEGLLGLESIAEAEPDPYARKGLQLLVDGAE 120
148 GMLGWVFFPPREDLSSGIDRIVSWSMTARKEGLLGLESIAEAEPDPYARKGLQLLVDGAE 92

IGB83 PEVIRSILEVDLFTQESRDLQAAKVFESMGGYAPTIGIIGAVMGLIHVMGNLANPAQLGS 180
M10 PEVIRSILEVDLFTQESRDLQAAKVFESMGGYAPTIGIIGAVMGLIHVMGNLANPAQLGS 180
ID4365 PEVIRSILEVDLFTQESRDLQAAKVFESMGGYAPTIGIIGAVMGLIHVMGNLANPAQLGS 180
PA01 PEVIRSILEVDLFTQESRDLQAAKVFESMGGYAPTIGIIGAVMGLIHVMGNLANPAQLGS 180
148 PEVIRSILEVDLFTQESRDLQAAKVFESMGGYAPTIGIIGAVMGLIHVMGNLANPAQLGS 152

IGB83 GIAVAFVATIYGVGAFANLLLPIGNKLTVLVLRQSRREMLLEGLLSIAEGENPRSELK 240
M10 GIAVAFVATIYGVGAFANLLLPIGNKLTVLVLRQSRREMLLEGLLSIAEGENPRSELK 240
ID4365 GIAVAFVATIYGVGAFANLLLPIGNKLTVLVLRQSRREMLLEGLLSIAEGENPRSELK 240
PA01 GIAVAFVATIYGVGAFANLLLPIGNKLTVLVLRQSRREMLLEGLLSIAEGENPRSELK 240
148 GIAVAFVATIYGVGAFANLLLPIGNKLTVLVLRQSRREMLLEGLLSIAEGENPRSELK 212

IGB83 LQGFMD 246
M10 LQGFMD 246
ID4365 LQGFMD 246
PA01 LQGFMD 246
148 LQGFMD 218

motD

IGB83 MQRRRRHQEEHENHERWLVSADFITLLFAFFVVMYSSINEGKYKILSETLTGVFNQP 60
M10 MQRRRRHQEEHENHERWLVSADFITLLFAFFVVMYSSINEGKYKILSETLTGVFNQP 60
ID4365 MQRRRRHQEEHENHERWLVSADFITLLFAFFVVMYSSINEGKYKILSETLTGVFNQP 60
PA01 MQRRRRHQEEHENHERWLVSADFITLLFAFFVVMYSSINEGKYKILSETLTGVFNQP 60
148 MQRRRRHQEEHENHERWLVSADFITLLFAFFVVMYSSINEGKYKILSETLTGVFNQP 60

IGB83 DRSLKPIPIGDERPRTTEPERTSVVEEQPSDNAASADSLERIASVRDAFGDLIASDQLSV 120
M10 DRSLKPIPIGDERPRTTEPERTSVVEEQPSDNAASADSLERIASVRDAFGDLIASDQLSV 120
ID4365 DRSLKPIPIGDERPRTTEPERTSVVEEQPSDNAASADSLERIASVRDAFGDLIASDQLSV 120
PA01 DRSLKPIPIGDERPRTTEPERTSVVEEQPSDNAASADSLERIASVRDAFGDLIASDQLSV 120
148 DRSLKPIPIGDERPRTTEPERTSVVEEQPSDNAASADSLERIASVRDAFGDLIASDQLSV 120

IGB83 RGNELWIEITLNSLLFPDGDALPNDAAFDIVEKVAKILAPYKNPIHVEGFTDDVPIHSP 180
M10 RGNELWIEITLNSLLFPDGDALPNDAAFDIVEKVAKILAPYKNPIHVEGFTDDVPIHSP 180
ID4365 RGNELWIEITLNSLLFPDGDALPNDAAFDIVEKVAKILAPYKNPIHVEGFTDDVPIHSP 180
PA01 RGNELWIEITLNSLLFPDGDALPNDAAFDIVEKVAKILAPYKNPIHVEGFTDDVPIHSP 180
148 RGNELWIEITLNSLLFPDGDALPNDAAFDIVEKVAKILAPYKNPIHVEGFTDDVPIHSP 180

IGB83 RYPTNWELSAARAASIVRLLGNDGVEPSRMAAVGYGEFQPVDNASEGRAKNRRVVLVI 240
M10 RYPTNWELSAARAASIVRLLGNDGVEPSRMAAVGYGEFQPVDNASEGRAKNRRVVLVI 240
ID4365 RYPTNWELSAARAASIVRLLGNDGVEPSRMAAVGYGEFQPVDNASEGRAKNRRVVLVI 240
PA01 RYPTNWELSAARAASIVRLLGNDGVEPSRMAAVGYGEFQPVDNASEGRAKNRRVVLVI 240
148 RYPTNWELSAARAASIVRLLGNDGVEPSRMAAVGYGEFQPVDNASEGRAKNRRVVLVI 240

IGB83 SRNLEVRSSVSGVSGKAQPSALRHAGSAAQTQAADTGGTPAPAPATVNSPSPSP 296
M10 SRNLEVRSSVSGVSGKAQPSALRHAGSAAQTQAADTGGTPAPAPATVNSPSPSP 296
ID4365 SRNLEVRSSVSGVSGKAQPSALRHAGSAAQTQAADTGGTPAPAPATVNSPSPSP 296
PA01 SRNLEVRSSVSGVSGKAQPSALRHAGSAAQTQAADTGGTPAPAPATVNSPSPSP 296
148 SRNLEVRSSVSGVSGKAQPSALRHAGSAAQTQAADTGGTPAPAPATVNSPSPSP 296

motY

148 MQPRLLLL PFLSSLPALAVTFQTRLESVEWKVEGDQFECRLSQPVANFGVGEFVRRAGE 60
ID4365 MQPRLLLL PFLSSLPALAVTFQTRLESVEWKVEGDQFECRLSQPVANFGVGEFVRRAGE 60
PA01 MQPRLLLL PFLSSLPALAVTFQTRLESVEWKVEGDQFECRLSQPVANFGVGEFVRRAGE 60
IGB83 MQPRLLLL PFLSSLPALAVTFQTRLESVEWKVEGDQFECRLSQPVANFGVGEFVRRAGE 60
M10 MQPRLLLL PFLSSLPALAVTFQTRLESVEWKVEGDQFECRLSQPVANFGVGEFVRRAGE 60

148 QATFRLKPEAQWLGRGSATLLAAAPPWRPGQDINLGQVSI GSGEVPFNSSQQQAGRLLT 120
ID4365 QATFRLKPEAQWLGRGSATLLAAAPPWRPGQDINLGQVSI GSGEVPFNSSQQQAGRLLT 120
PA01 QATFRLKPEAQWLGRGSATLLAAAPPWRPGQDINLGQVSI GSGEVPFNSSQQQAGRLLT 120
IGB83 QATFRLKPEAQWLGRGSATLLAAAPPWRPGQDINLGQVSI GSGEVPFNSSQQQAGRLLT 120
M10 QATFRLKPEAQWLGRGSATLLAAAPPWRPGQDINLGQVSI GSGEVPFNSSQQQAGRLLT 120

148 GLLEGRSPLVRHRTWQDRLEVRLPARFASVYSQYQACIAKLLPVNFDQVKLAQVGFDP 180
ID4365 GLLEGRSPLVRHRTWQDRLEVRLPARFASVYSQYQACIAKLLPVNFDQVKLAQVGFDP 180
PA01 GLLEGRSPLVRHRTWQDRLEVRLPARFASVYSQYQACIAKLLPVNFDQVKLAQVGFDP 180
IGB83 GLLEGRSPLVRHRTWQDRLEVRLPARFASVYSQYQACIAKLLPVNFDQVKLAQVGFDP 180
M10 GLLEGRSPLVRHRTWQDRLEVRLPARFASVYSQYQACIAKLLPVNFDQVKLAQVGFDP 180

148 GGTALNDVARAKLDIILQLLKADPSINRIELDGHSDNSGNRLTNRDLSRRRALAVQEYLK 240
ID4365 GGTALNDVARAKLDIILQLLKADPSINRIELDGHSDNSGNRLTNRDLSRRRALAVQEYLK 240
PA01 GGTALNDVARAKLDIILQLLKADPSINRIELDGHSDNSGNRLTNRDLSRRRALAVQEYLK 240
IGB83 GGTALNDVARAKLDIILQLLKADPSINRIELDGHSDNSGNRLTNRDLSRRRALAVQEYLK 240
M10 GGTALNDVARAKLDIILQLLKADPSINRIELDGHSDNSGNRLTNRDLSRRRALAVQEYLK 240

148 SNGVPESQINRVFYGERYPLVANNSAANRARNRRVTVHLSREAVVEPATEAPKAEDKPAP 300
ID4365 SNGVPESQINRVFYGERYPLVANNSAANRARNRRVTVHLSREAVVEPATEAPKAEDKPAP 300
PA01 SNGVPESQINRVFYGERYPLVANNSAANRARNRRVTVHLSREAVVEPATEAPKAEDKPAP 300
IGB83 SNGVPESQINRVFYGERYPLVANNSAANRARNRRVTVHLSREAVVEPATEAPKAEDKPAP 300
M10 SNGVPESQINRVFYGERYPLVANNSAANRARNRRVTVHLSREAVVEPATEAPKAEDKPAP 300

148 PAAEPAAPKPP-AASLQKPTV----- 321
ID4365 PAAEPAAPKPP-AASLQKPTV----- 321
PA01 PAAEPAAPKPP-AASLQKPTV----- 321
IGB83 PAAEPAAPKPP-AASLQKPTV----- 321
M10 PAAEPAAPRSLRPPRFRENPRFESRKR 327
*****: . . . : * .

fliH

PA01 MYPHDKDKDNPSSELIRGKDVAAFGLWSLPSFDEPRDEPAVAAPQVPAVAEPAPAPAVEE 60
148 MYPHDKDKDNPSSELIRGKDVAAFGLWSLPSFDEPRDEPAVAAPQVPAVAEPAPAPAVEE 60
IGB83 MYPHDKDKDNPSSELIRGKDVAAFGLWSLPSFDEPRDEPAVAAPQVPAVAEPAPAPAVEE 60
M10 MYPHDKDKDNPSSELIRGKDVAAFGLWSLPSFDEPRDEPAVAAPQVPAVAEPAPAPAVEE 60
ID4365 MYPHDKDKDNPSSELIRGKDVAAFGLWSLPSFDEPRDEPAVAAPQVPAVAEPAPAPAVEE 60

PA01 VELETVKPPTLEEIEAIRQDAYNEGFATGERDGFHAGQLKARQEAEEALKERLQSLERLM 120
148 VELETVKPPTLEEIEAIRQDAYNEGFATGERDGFHAGQLKARQEAEEALKERLQSLERLM 120
IGB83 VELETVKPPTLEEIEAIRQDAYNEGFATGERDGFHAGQLKARQEAEEALKERLQSLERLM 120
M10 VELETVKPPTLEEIEAIRQDAYNEGFATGERDGFHAGQLKARQEAEEALKERLQSLERLM 120
ID4365 VELETVKPPTLEEIEAIRQDAYNEGFATGERDGFHAGQLKARQEAEEALKERLQSLERLM 120

PA01 TQLEPIAEQDALIEQGMVNLVNHVARQVIQRELHMDSSHVRQVLRREALKLLPMGAANIR 180
148 TQLEPIAEQDALIEQGMVNLVNHVARQVIQRELHMDSSHVRQVLRREALKLLPMGAANIR 180
IGB83 TQLEPIAEQDALIEQGMVNLVNHVARQVIQRELHMDSSHVRQVLRREALKLLPMGAANIR 180
M10 TQLEPIAEQDALIEQGMVNLVNHVARQVIQRELHMDSSHVRQVLRREALKLLPMGAANIR 180
ID4365 TQLEPIAEQDALTIEQGMVNLVNHVARQVIQRELHMDSSHVRQVLRREALKLLPMGAANIR 180

PA01 IHVNPQDFERVKALRERHEESWRILEDDSLPGGCRITETHSRIDATIETRLAQAVKQLF 240

148 IHVNPQDFERVKALRERHEESWRILEDDSLPGGCRIETESRIDATIETRLAQAVKQLF 240
IGB83 IHVNPQDFERVKALRERHEESWRILEDDSLPGGCRIETESRIDATIETRLAQAVKQLF 240
M10 IHVNPQDFERVKALRERHEESWRILEDDSLPGGCRIETESRIDATIETRLAQAVKQLF 240
ID4365 IHVNPQDFERVKALRERHEESWRILEDDSLPGGCRIETESRIDATIETRLAQAVKQLF 240

PA01 EQQREQATHPLASDIRIDLDAPGDVDAP 268
148 EQQREQATHPLASDIRIDLDAPGDVDAP 268
IGB83 EQQREQATHPLASDIRIDLDAPGDVDAP 268
M10 EQQREQATHPLASDIRIDLDAPGDVDAP 268
ID4365 EQQREQATHPLASDIRIDLDAPGDVDAP 268

flis

IGB83 MYAMKAMKQYQQVSI EAQVSDANPHRLIQLLMQGGLERLAQARGAMEREQIPEKGILIGK 60
M10 MYAMKAMKQYQQVSI EAQVSDANPHRLIQLLMQGGLERLAQARGAMEREQIPEKGILIGK 60
PA01 MYAMKAMKQYQQVSI EAQVSDANPHRLIQLLMQGGLERLAQARGAMEREQIPEKGILIGK 60
ID4365 MYAMKAMKQYQQVSI EAQVSDANPHRLIQLLMQGGLERLAQARGAMEREQIPEKGILIGK 60
148 ---MAAMRQYQNVSTQAQIDASPHRLIQMLMEGGLTRMAQARGALERGEVALKGEIGK 57
* **:***:** :** . ** .*****:**:*** *:*****:** :;. ** ****

IGB83 AIGIIGGLREALDSEGGELAGNLDRLYEYMIARLVEANTSNDTSLLEVSALLEVKSG 120
M10 AIGIIGGLREALDSEGGELAGNLDRLYEYMIARLVEANTSNDTSLLEVSALLEVKSG 120
PA01 AIGIIGGLREALDSEGGELAGNLDRLYEYMIARLVEANTSNDTSLLEVSALLEVKSG 120
ID4365 AIGIIGGLREALDSEGGELAGNLDRLYEYMIARLVEANTSNDTSLLEVSALLEVKSG 120
148 AIAIVGGLREGLDFEAGGELAANLDRLYAYMSMRLTEANLKNAGKLEEVSELLRNKSG 117
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IGB83 WDGISH 126
M10 WDGISH 126
PA01 WDGISH 126
ID4365 WDGISH 126
148 WDAIAP 123
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