CLUSTAL O(1.2.4) multiple sequence alignment

MER0000215\_coagulation\_factor\_VIIa IVGGKVCPKGECPWQVLLLV------NGAQLCGGTLINTIWVVSAAHCFDKIK-NWRNLI 53

MER0000212\_coagulation\_factor\_Xa IVGGQECKDGECPWQALLIN-----EENEGFCGGTILSEFYILTAAHCLYQAK-RF---K 51

MER0000216\_coagulation\_factor\_IXa VVGGEDAKPGQFPWQVVL-N-----GKVDAFCGGSIVNEKWIVTAAHCVETGV-KI---T 50

MER0000761\_chymotrypsin\_C\_[S01.157] VVGGEDARPHSWPWQISLQYLKN--DTWRHTCGGTLIASNFVLTAAHCISNTR-TY---R 54

MER0000020\_cationic\_trypsin\_({Homo IVGGYNCEENSVPYQVSLN-------SGYHFCGGSLINEQWVVSAGHCYKSR---I---Q 47

MER0000001\_chymotrypsin\_B\_[S01.152] IVNGEDAVPGSWPWQVSLQD-----KTGFHFCGGSLISEDWVVTAAHCGVRTS--D---V 50

MER0001503\_chymopasin\_[S01.256]\_peptidase IVNGENAVLGSWPWQVSLQD-----SSGFHFCGGSLISQSWVVTAAHCNVSPG-RH---F 51

MER0000187\_coagulation\_factor\_XIIa VVGGLVALRGAHPYIAALYWGHS-------FCAGSLIAPCWVLTAAHCLQDRP-APEDLT 52

MER0000195\_urokinase-type\_plasminogen\_activator IIGGEFTTIENQPWFAAIYRRHRG-GSVTYVCGGSLISPCWVISATHCFIDYP-KKEDYI 58

MER0000192\_t-plasminogen\_activator\_[S01.232] IKGGLFADIASHPWQAAIFAKHRRSPGERFLCGGILISSCWILSAAHCFQERF-PPHHLT 59

MER0000135\_tryptase\_alpha\_[S01.143] IVGGQEAPRSKWPWQVSLRVHG---PYWMHFCGGSLIHPQWVLTAAHCVGPDVKDLAALR 57

MER0005948\_tryptase\_delta\_1 IVGGQEAPRSKWPWQVSLRVRG---PYWMHFCGGSLIHPQWVLTAAHCVEPDIKDLAALR 57

MER0006118\_tryptase-6\_[S01.075]\_peptidase IVGGRDGRDGEWPWQASIQHRG------AHVCGGSLIAPQWVLTAAHCFPRRALP-AEYR 53

MER0011036\_tryptase\_gamma\_1 IVGGHAAPAGAWPWQASLRLRR------MHVCGGSLLSPQWVLTAAHCFSGSLNS-SDYQ 53

MER0000175\_plasmin\_[S01.233]\_peptidase VVGGCVAHPHSWPWQVSLRTR-----FGMHFCGGTLISPEWVLTAAHCLEKSP-RPSSYK 54

MER0006298\_DESC1\_peptidase\_[S01.021] IVGGTEVEEGEWPWQASLQWD------GSHRCGATLINATWLVSAAHCFTTYK-NPARWT 53

MER0000210\_coagulation\_factor\_XIa IVGGTASVRGEWPWQVTLHTTS---PTQRHLCGGSIIGNQWILTAAHCFYGVE-SPKILR 56

MER0000203\_plasma\_kallikrein\_[S01.212] IVGGTNSSWGEWPWQVSLQVKL---TAQRHLCGGSLIGHQWVLTAAHCFDGLP-LQDVWR 56

MER0003736\_epitheliasin\_[S01.247]\_peptidase IVGGESALPGAWPWQVSLHVQ------NVHVCGGSIITPEWIVTAAHCVEKPLNNPWHWT 54

MER0002068\_enteropeptidase\_[S01.156]\_peptidase IVGGSNAKEGAWPWVVGLYYG------GRLLCGASLVSSDWLVSAAHCVYGRNLEPSKWT 54

MER0000156\_hepsin\_[S01.224]\_peptidase IVGGRDTSLGRWPWQVSLRYD------GAHLCGGSLLSGDWVLTAAHCFPERNRVLSRWR 54

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MER0000215\_coagulation\_factor\_VIIa AVLGEHDLSEHD-GDEQSRRVAQVIIP------STYV--PGTTNHDIALLRLHQ-----P 99

MER0000212\_coagulation\_factor\_Xa VRVGDRNTEQEE-GGEAVHEVEVVIKH------NRFT--KETYDFDIAVLRLKT-----P 97

MER0000216\_coagulation\_factor\_IXa VVAGEHNIEETE-HTEQKRNVIRIIPH------HNYNAAINKYNHDIALLELDE-----P 98

MER0000761\_chymotrypsin\_C\_[S01.157] VAVGKNNLEVEDEEGSLFVGVDTIHVH------KRWN--ALLLRNDIALIKLAE-----H 101

MER0000020\_cationic\_trypsin\_({Homo VRLGEHNIEVLE-GNEQFINAAKIIRH------PQYD--RKTLNNDIMLIKLSS-----R 93

MER0000001\_chymotrypsin\_B\_[S01.152] VVAGEFDQGSDE-ENIQVLKIAKVFKN------PKFS--ILTVNNDITLLKLAT-----P 96

MER0001503\_chymopasin\_[S01.256]\_peptidase VVLGEYDRSSNA-EPLQVLSVSRAITH------PSWN--STTMNNDVTLLKLAS-----P 97

MER0000187\_coagulation\_factor\_XIIa VVLGQERRNHSC-EPCQTLAVRSYRLH------EAFSPVSYQH--DLALLRLQEDADGSC 103

MER0000195\_urokinase-type\_plasminogen\_activator VYLGRSRLNSNT-QGEMKFEVENLILH------KDYSADTLAHHNDIALLKIRS-KEGRC 110

MER0000192\_t-plasminogen\_activator\_[S01.232] VILGRTYRVVPG-EEEQKFEVEKYIVH------KEFDDDTY--DNDIALLQLKS-DSSRC 109

MER0000135\_tryptase\_alpha\_[S01.143] VQLREQHLYY-Q---DQLLPVSRIIVH------PQFYTAQ--IGADIALLELEE-----P 100

MER0005948\_tryptase\_delta\_1 VQLREQHLYY-Q---DQLLPVSRIIVH------PQFYIIQ--TGADIALLELEE-----P 100

MER0006118\_tryptase-6\_[S01.075]\_peptidase VRLGALRLGS-TSPRTLSVPVRRVLLP------PDYSEDG--ARGDLALLQLRR-----P 99

MER0011036\_tryptase\_gamma\_1 VHLGELEITL-SPH--FSTVRQIILHS------SPSGQPG--TSGDIALVELSV-----P 97

MER0000175\_plasmin\_[S01.233]\_peptidase VILGAHQEVNLE------PHVQEIEVS-------RLFLEP--TRKDIALLKLSS-----P 94

MER0006298\_DESC1\_peptidase\_[S01.021] ASFGVTIK-----PSKMKRGLRRIIVH------EKYKHPS--HDYDISLAELSS-----P 95

MER0000210\_coagulation\_factor\_XIa VYSGILNQSEIKEDTSF-FGVQEIIIH------DQYKMAE--SGYDIALLKLET-----T 102

MER0000203\_plasma\_kallikrein\_[S01.212] IYSGILNLSDITKDTPF-SQIKEIIIH------QNYKVSE--GNHDIALIKLQA-----P 102

MER0003736\_epitheliasin\_[S01.247]\_peptidase AFAGILRQSFMFYGAGYQ--VEKV------ISHPNYDSKT--KNNDIALMKLQK-----P 99

MER0002068\_enteropeptidase\_[S01.156]\_peptidase AILGLHMKSNLTSPQTVPRLIDEIVIN------PHYNRRR--KDNDIAMMHLEF-----K 101

MER0000156\_hepsin\_[S01.224]\_peptidase VFAGAVAQAS---PHGLQLGVQAVVYHGGYLPFRDPNSEE--NSNDIALVHLSS-----P 104

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MER0000215\_coagulation\_factor\_VIIa VVLTDHVVPLCLPERTFSERTLAFVRFSLVSGWGQLLDRGA--TALELMVLNVPRLMTQD 157

MER0000212\_coagulation\_factor\_Xa ITFRMNVAPACLPERDWAESTLMTQKTGIVSGFGRTHEKGR--QSTRLKMLEVPYVDRNS 155

MER0000216\_coagulation\_factor\_IXa LVLNSYVTPICIADKEYTNI-FLKFGSGYVSGWGRVFHKGR--SALVLQYLRVPLVDRAT 155

MER0000761\_chymotrypsin\_C\_[S01.157] VELSDTIQVACLPEKDS---LLPKDYPCYVTGWGRLWTNGP--IADKLQQGLQPVVDHAT 156

MER0000020\_cationic\_trypsin\_({Homo AVINARVSTISLPTAPP-----ATGTKCLISGWGNTASSGAD-YPDELQCLDAPVLSQAK 147

MER0000001\_chymotrypsin\_B\_[S01.152] ARFSQTVSAVCLPSADD---DFPAGTLCATTGWGKTKYNANK-TPDKLQQAALPLLSNAE 152

MER0001503\_chymopasin\_[S01.256]\_peptidase AQYTTRISPVCLASSNE---ALTEGLTCVTTGWGRLSGVGNV-TPAHLQQVALPLVTVNQ 153

MER0000187\_coagulation\_factor\_XIIa ALLSPYVQPVCLPSGAA---RPSETTLCQVAGWGHQFEGAEE-YASFLQEAQVPFLSLER 159

MER0000195\_urokinase-type\_plasminogen\_activator AQPSRTIQTICLPSMYN---DPQFGTSCEITGFGKENSTDYL-YPEQLKMTVVKLISHRE 166

MER0000192\_t-plasminogen\_activator\_[S01.232] AQESSVVRTVCLPPADL---QLPDWTECELSGYGKHEALSPF-YSERLKEAHVRLYPSSR 165

MER0000135\_tryptase\_alpha\_[S01.143] VNVSSHVHTVTLPPASE---TFPPGMPCWVTGWGDVDNDERLPPPFPLKQVKVPIMENHI 157

MER0005948\_tryptase\_delta\_1 VNISSHIHTVTLPPASE---TFPPGMPCWVTGWGDVDNNVHLPPPYPLKEVEVPVVENHL 157

MER0006118\_tryptase-6\_[S01.075]\_peptidase VPLSARVQPVCLPVPGA---RPPPGTPCRVTGWGSLRPGVPLPEWRPLQGVRVPLLDSRT 156

MER0011036\_tryptase\_gamma\_1 VTLSSRILPVCLPEASD---DFCPGIRCWVTGWGYTREGEPLPPPYSLREVKVSVVDTET 154

MER0000175\_plasmin\_[S01.233]\_peptidase AVITDKVIPACLPSPNY---VVADRTECFITGWGETQG-TFG--AGLLKEAQLPVIENKV 148

MER0006298\_DESC1\_peptidase\_[S01.021] VPYTNAVHRVCLPDASY---EFQPGDVMFVTGFGALKNDGYS--QNHLRQAQVTLIDATT 150

MER0000210\_coagulation\_factor\_XIa VNYTDSQRPICLPSKGD---RNVIYTDCWVTGWGYRKLRDKI--QNTLQKAKIPLVTNEE 157

MER0000203\_plasma\_kallikrein\_[S01.212] LNYTEFQKPICLPSKGD---TSTIYTNCWVTGWGFSKEKGEI--QNILQKVNIPLVTNEE 157

MER0003736\_epitheliasin\_[S01.247]\_peptidase LTFNDLVKPVCLPNPGM---MLQPEQLCWISGWGATEEKGKT--SEVLNAAKVLLIETQR 154

MER0002068\_enteropeptidase\_[S01.156]\_peptidase VNYTDYIQPICLPEENQ---VFPPGRNCSIAGWGTVVYQGTT--ANILQEADVPLLSNER 156

MER0000156\_hepsin\_[S01.224]\_peptidase LPLTEYIQPVCLPAAGQ---ALVDGKICTVTGWGNTQYYGQQ--AGVLQEARVPIISNDV 159

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MER0000215\_coagulation\_factor\_VIIa CLQQSRKVGDS-------PNITEYMFCAGYSDG------SKDSCKGDSGGPHATHY---- 200

MER0000212\_coagulation\_factor\_Xa CKLSS-----S-------FIITQNMFCAGYDTK------QEDACQGDSGGPHVTRF---- 193

MER0000216\_coagulation\_factor\_IXa CLRST-----K-------FTIYNNMFCAGFHEG------GRDSCQGDSGGPHVTEV---- 193

MER0000761\_chymotrypsin\_C\_[S01.157] CSRID---WWG-------FRVKKTMVCAGG-DG------VISACNGDSGGPLNCQLE--- 196

MER0000020\_cationic\_trypsin\_({Homo CE--A---SYP-------GKITSNMFCVGFLEG------GKDSCQGDSGGPVVCNG---- 185

MER0000001\_chymotrypsin\_B\_[S01.152] CK--K---SWG-------RRITDVMICAGA--S------GVSSCMGDSGGPLVCQK---- 188

MER0001503\_chymopasin\_[S01.256]\_peptidase CR--Q---YWG-------SSITDSMICAGG--A------GASSCQGDSGGPLVCQK---- 189

MER0000187\_coagulation\_factor\_XIIa CSAPD---VHG-------SSILPGMLCAGFLEG------GTDACQGDSGGPLVCEDQ-AA 202

MER0000195\_urokinase-type\_plasminogen\_activator CQQPH---YYG-------SEVTTKMLCAADPQW------KTDSCQGDSGGPLVCSLQ--- 207

MER0000192\_t-plasminogen\_activator\_[S01.232] CTSQH---LLN-------RTVTDNMLCAGDTRSGGPQANLHDACQGDSGGPLVCLND--- 212

MER0000135\_tryptase\_alpha\_[S01.143] CDAKY---HLGAYTGDDVRIVRDDMLCAGNT--------RRDSCQGDSGGPLVCKV---- 202

MER0005948\_tryptase\_delta\_1 CNAEY---HTGLHTGHSFQIVRDDMLCAGSE--------NHDSCQGDSGGPLVCKV---- 202

MER0006118\_tryptase-6\_[S01.075]\_peptidase CDGLY---HVGADVPQAERIVLPGSLCAGYPQG------HKDACQGDSGGPLTCLQ---- 203

MER0011036\_tryptase\_gamma\_1 CRRDY---PGP-----GGSILQPDMLCA---RG------PGDACQDDSGGPLVCQV---- 193

MER0000175\_plasmin\_[S01.233]\_peptidase CNRYE---FLN-------GRVQSTELCAGHLAG------GTDSCQGDSGGPLVCFE---- 188

MER0006298\_DESC1\_peptidase\_[S01.021] CNEPQ---AYN-------DAITPRMLCAGSLEG------KTDACQGDSGGPLVSSD---A 191

MER0000210\_coagulation\_factor\_XIa CQKR----YRG-------HKITHKMICAGYREG------GKDACKGDSGGPLSCKH---- 196

MER0000203\_plasma\_kallikrein\_[S01.212] CQKR----YQD-------YKITQRMVCAGYKEG------GKDACKGDSGGPLVCKH---- 196

MER0003736\_epitheliasin\_[S01.247]\_peptidase CNSRY---VYD-------NLITPAMICAGFLQG------NVDSCQGDSGGPLVTSK---- 194

MER0002068\_enteropeptidase\_[S01.156]\_peptidase CQQQ----MPE-------YNITENMICAGYEEG------GIDSCQGDSGGPLMCQE---- 195

MER0000156\_hepsin\_[S01.224]\_peptidase CNGAD---FYG-------NQIKPKMFCAGYPEG------GIDACQGDSGGPFVCEDSISR 203

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MER0000215\_coagulation\_factor\_VIIa RGTWYLTGIVSWGQ--GCATVGHFGVYTRVSQYIEWLQKLMRSEPRPGVLLRAPFP---- 254

MER0000212\_coagulation\_factor\_Xa KDTYFVTGIVSWGE--GCARKGKYGIYTKVTAFLKWIDRSMKTRGLPKAKSHAPEVITSS 251

MER0000216\_coagulation\_factor\_IXa EGTSFLTGIISWGE--ECAMKGKYGIYTKVSRYVNWIKEKTKLT---------------- 235

MER0000761\_chymotrypsin\_C\_[S01.157] NGSWEVFGIVSFGSRRGCNTRKKPVVYTRVSAYIDWINEKMQL----------------- 239

MER0000020\_cationic\_trypsin\_({Homo ----QLQGVVSWGD--GCAQKNKPGVYTKVYNYVKWIKNTIAANS--------------- 224

MER0000001\_chymotrypsin\_B\_[S01.152] DGAWTLVGIVSWGS--DTCSTSSPGVYARVTKLIPWVQKILAAN---------------- 230

MER0001503\_chymopasin\_[S01.256]\_peptidase GNTWVLIGIVSWGT--KNCNVRAPAVYTRVSKFSTWINQVIAYN---------------- 231

MER0000187\_coagulation\_factor\_XIIa ERRLTLQGIISWGS--GCGDRNKPGVYTDVAYYLAWIREHTVS----------------- 243

MER0000195\_urokinase-type\_plasminogen\_activator -GRMTLTGIVSWGR--GCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL----------- 253

MER0000192\_t-plasminogen\_activator\_[S01.232] -GRMTLVGIISWGL--GCGQKDVPGVYTKVTNYLDWIRDNMRP----------------- 252

MER0000135\_tryptase\_alpha\_[S01.143] NGTWLQAGVVSWGE--GCAQPNRPGIYTRVTYYLDWIHHYVPKKP--------------- 245

MER0005948\_tryptase\_delta\_1 NGT--------------------------------------------------------- 205

MER0006118\_tryptase-6\_[S01.075]\_peptidase SGSWVLVGVVSWGK--GCALPNRPGVYTSVATYSPWIQARVSF----------------- 244

MER0011036\_tryptase\_gamma\_1 NGAWVQAGTVSWGE--GCGRPNRPGVYTRVPAYVNWIRRHITASGGSESGYP-RLPLLAG 250

MER0000175\_plasmin\_[S01.233]\_peptidase KDKYILQGVTSWGL--GCARPNKPGVYVRVSRFVTWIEGVMRNN---------------- 230

MER0006298\_DESC1\_peptidase\_[S01.021] RDIWYLAGIVSWGD--ECAKPNKPGVYTRVTALRDWITSKTGI----------------- 232

MER0000210\_coagulation\_factor\_XIa NEVWHLVGITSWGE--GCAQRERPGVYTNVVEYVDWILEKTQAV---------------- 238

MER0000203\_plasma\_kallikrein\_[S01.212] NGMWRLVGITSWGE--GCARREQPGVYTKVAEYMDWILEKTQSSDGKAQMQS-PA----- 248

MER0003736\_epitheliasin\_[S01.247]\_peptidase NNIWWLIGDTSWGS--GCAKAYRPGVYGNVMVFTDWIYRQMRADG--------------- 237

MER0002068\_enteropeptidase\_[S01.156]\_peptidase NNRWFLAGVTSFGY--KCALPNRPGVYARVSRFTEWIQSFLH------------------ 235

MER0000156\_hepsin\_[S01.224]\_peptidase TPRWRLCGIVSWGT--GCALAQKPGVYTKVSDFREWIFQAIKTHSEASGMVT-QL----- 255

MER0000215\_coagulation\_factor\_VIIa ---------------------------------- 254

MER0000212\_coagulation\_factor\_Xa PLK------------------------------- 254

MER0000216\_coagulation\_factor\_IXa ---------------------------------- 235

MER0000761\_chymotrypsin\_C\_[S01.157] ---------------------------------- 239

MER0000020\_cationic\_trypsin\_({Homo ---------------------------------- 224

MER0000001\_chymotrypsin\_B\_[S01.152] ---------------------------------- 230

MER0001503\_chymopasin\_[S01.256]\_peptidase ---------------------------------- 231

MER0000187\_coagulation\_factor\_XIIa ---------------------------------- 243

MER0000195\_urokinase-type\_plasminogen\_activator ---------------------------------- 253

MER0000192\_t-plasminogen\_activator\_[S01.232] ---------------------------------- 252

MER0000135\_tryptase\_alpha\_[S01.143] ---------------------------------- 245

MER0005948\_tryptase\_delta\_1 ---------------------------------- 205

MER0006118\_tryptase-6\_[S01.075]\_peptidase ---------------------------------- 244

MER0011036\_tryptase\_gamma\_1 LFLPGLFLLLVSCVLLAKCLLHPSADGTPFPAPD 284

MER0000175\_plasmin\_[S01.233]\_peptidase ---------------------------------- 230

MER0006298\_DESC1\_peptidase\_[S01.021] ---------------------------------- 232

MER0000210\_coagulation\_factor\_XIa ---------------------------------- 238

MER0000203\_plasma\_kallikrein\_[S01.212] ---------------------------------- 248

MER0003736\_epitheliasin\_[S01.247]\_peptidase ---------------------------------- 237

MER0002068\_enteropeptidase\_[S01.156]\_peptidase ---------------------------------- 235

MER0000156\_hepsin\_[S01.224]\_peptidase ---------------------------------- 255