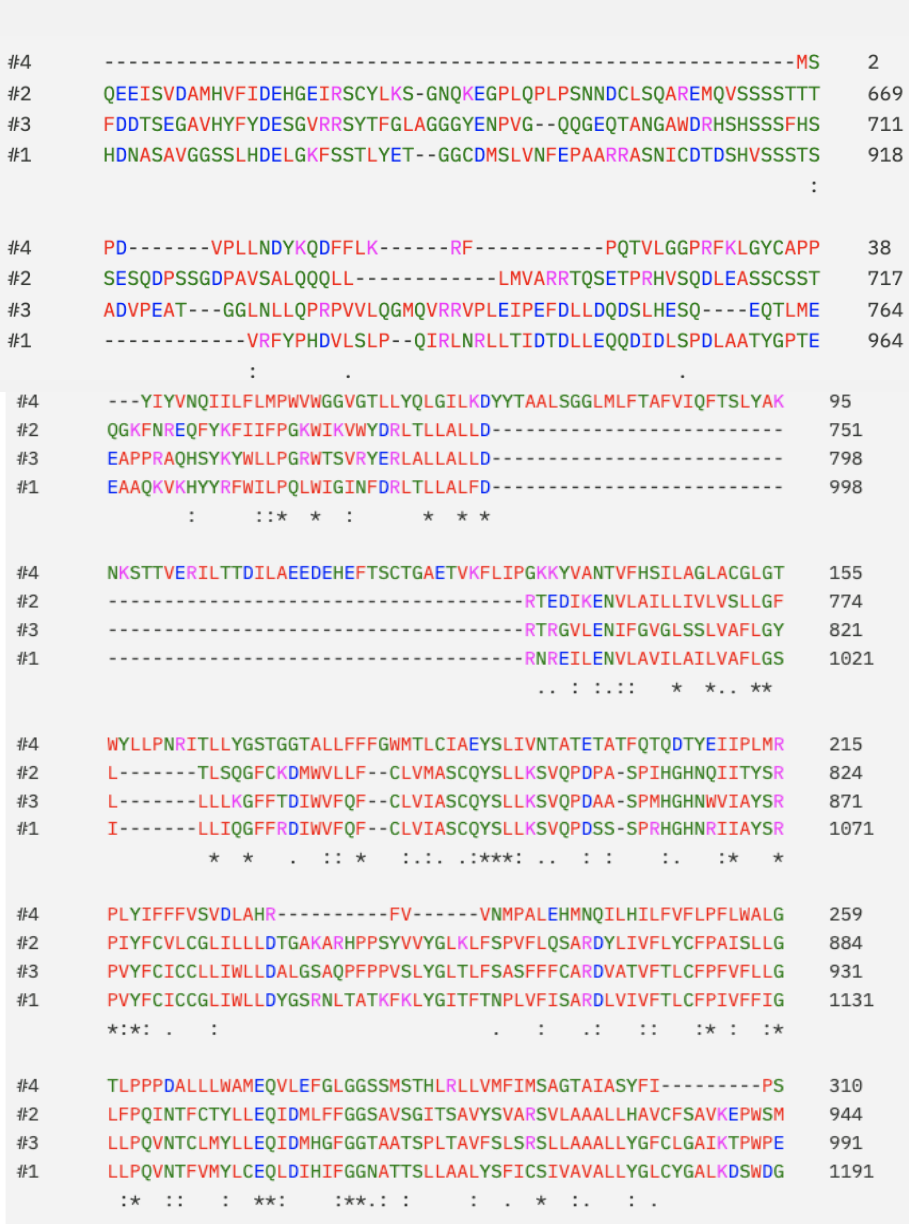
#4 ----------MS 2
#2 QEEISVDAMHVFIDEHGEIRSCYLKS-GNQKEGPLQPLPSNNDCLSQAREMQVSSSSTTT 669
#3 FDDTSEGAVHYFYDESGVRRSYTFGLAGGGYENPVG--QQGEQTANGAWDRHSHSSSFHS 711
#1 HDNASAVGGSSLHDELGKFSSTLYET--GGCDMSLVNFEPAARRASNICDTDSHVSSSTS 918
PD------VPLLNDYKQDFFLK------RF----------PQTVLGGPRFKLGYCAPP 38
#2 SESQDPSSGDPAVSALQQQLL----------LMVARRTQSETPRHVSQDLEASSCSST 717
#3 ADVPEAT---GGLNLLQPRPVVLQGMQVRRVPLEIPEFDLLDQDSLHESQ----EQTLME 764
#1 ----------VRFYPHDVLSLP--QIRLNRLLTIDTDLLEQQDIDLSPDLAATYGPTE 964
#4 ---YIYVNQIILFLMPWVWGGVGTLLYQLGILKDYYTAALSGGLMLFTAFVIQFTSLYAK 95
#2 QGKFNREQFYKFIIFPGKWIKVWYDRLTLLALLD---------- 751
#3 EAPPRAQHSYKYWLLPGRWTSVRYERLALLALLD---------- 798
#1 EAAQKVKHYYRFWILPQLWIGINFDRLTLLALFD---------- 998
#4 NKSTTVERILTTDILAEEDEHEFTSCTGAETVKFLIPGKKYVANTVFHSILAGLACGLGT 155
#2 ----------RTEDIKENVLAILLIVLVSLLGF 774
#3 ----------RTRGVLENIFGVGLSSLVAFLGY 821
#1 ----------RNREILENVLAVILAILVAFLGS 1021
#4 WYLLPNRITLLYGSTGGTALLFFFGWMTLCIAEYSLIVNTATETATFQTQDTYEIIPLMR 215
#2 L-------TLSQGFCKDMWVLLF--CLVMASCQYSLLKSVQPDPA-SPIHGHNQIITYSR 824
#3 L-------LLLKGFFTDIWVFQF--CLVIASCQYSLLKSVQPDAA-SPMHGHNWVIAYSR 871
#1 I-------LLIQGFFRDIWVFQF--CLVIASCQYSLLKSVQPDSS-SPRHGHNRIIAYSR 1071
#4 PLYIFFFVSVDLAHR----------FV------VNMPALEHMNQILHILFVFLPFLWALG 259
#2 PIYFCVLCGLILLLDTGAKARHPPSYVVYGLKLFSPVFLQSARDYLIVFLYCFPAISLLG 884
#3 PVYFCICCLLIWLLDALGSAQPFPPVSLYGLTLFSASFFFCARDVATVFTLCFPFVFLLG 931
#1 PVYFCICCGLIWLLDYGSRNLTATKFKLYGITFTNPLVFISARDLVIVFTLCFPIVFFIG 1131
#4 TLPPPDALLLWAMEQVLEFGLGGSSMSTHLRLLVMFIMSAGTAIASYFI---------PS 310
#2 LFPQINTFCTYLLEQIDMLFFGGSAVSGITSAVYSVARSVLAAALLHAVCFSAVKEPWSM 944
#3 LLPQVNTCLMYLLEQIDMHGFGGTAATSPLTAVFSLSRSLLAAALLYGFCLGAIKTPWPE 991
#1 LLPQVNTFVMYLCEQLDIHIFGGNATTSLLAALYSFICSIVAVALLYGLCYGALKDSWDG 1191
#4 TVGVVLFMTGFGFLLSL--NLSDMG----------HKIG---------TKSKDLP 344
#2 QHIPALFSAFCGLLVALSYHLSRQSSDPSVLMSFIQCRLFPKFLHQNLAE---SAADPLP 1001
#3 QHVPVLFSVFCGLLVALSYHLSRQSSDPTVLWSLIRSKLFPELEERSLETARAEPPDPLP 1051
#1 QHIPVLFSIFCGLLVAVSYHLSRQSSDPSVLFSLVQSKIFPKTEEKNPEDPLSEVKDPLP 1251
#4 SG----PEKHFSWKECLFYIIILVL--ALLETSLLHHFAGFSQISKSNSQAIVGYGLMIL 398
#2 KKMKDSVTDVLKWDLIVC-AVVAVLSFAVSASTVFLSLRPFLSIVLFALAGAVGFV---- 1056
#3 DKMRQSVREVLHSDLVMC-VVIAVLTFAISASTVFIALKSVLGFVLYALAGAVGFF---- 1106
#1 EKLRNSVSERLQSDLVVC-IVIGVLYFAIHVSTVFTVLQPALKYVLYTLVGFVGFV---- 1306
#4 LIILWILREIQSVYIIGIFRNPF-----YPK-DVQ----------TVTVFFEKQTRLMKI 442
#2 --THYVLPQLRKHHPWMWISHPILKNKEYHQREVR--------DVAHLMWFERLYVWLQ- 1105
#3 --THYLLPQLRKQLPWFCLSQPVLKPLEYSQYEVR--------GAAQVMWFEKLYAGLQ- 1155
#1 --THYVLPQVRKQLPWHCFSHPLLKTLEYNQYEVRILIYTALLDAATMMWFEKLHVWLL- 1363
#4 GIVRRILLTLVSPFAMIAFLSLDSSLQGLHSVSVCIGFTRAFRMVWQNTENALLETVIVS 502
#2 -CFEK---YILYPALILNALTIDAFLI-SNHRRLGTHW-DIFLMIIA--GMKLLRTSFCN 1157
#3 -CVEK---YLIYPAVVLNALTVDAHTVVSHPDKYCFYC-RALLMTVA--GLKLLRSAFCC 1208
#1 -FVEK---NIIYPLIVLNELSSSAETI-ASPKKLNTEL-GALMITVA--GLKLLRSSFSS 1415
#4 TV-H--LISSTDIWW-----NRSLDTGLRLLLVGIIRDRLIQFISKLQFAVTVLLTSWTE 554
#2 PVYQFINLSFTVIFFHFDYKDISESFLLDFFMVSILFSKLGDLLHKLQFVLTYVA-PWQM 1216
#3 PPQQYLTLAFTVLLFHFDYPRLSQGFLLDYFLMSLLCSKLWDLLYKLRFVLTYIA-PWQI 1267
#1 PTYQYVTVIFTVLFFKFDYEAFSETMLLDLFFMSILFNKLWELLYKLQFVYTYIA-PWQI 1474
#4 KKQRRKTTATLCILNIVFSPFVLVIIVFSTLLSSPLLPLFTLPVFLVGFPRPIQSWPGAA 614
#2 AWGSS-FHVFAQLFAIPHSAMLFFQTIATSIFSTPLSPFLGSVIFITSYVRPVKFWEKNY 1275
#3 TWGSA-FHAFAQPFAVPHSAMLFVQALLSGLFSTPLNPLLGSAVFIMSYARPLKFWERDY 1326
#1 TWGSA-FHAFAQPFAVPHSAMLFIQAAVSAFFSTPLNPFLGSAIFITSYVRPVKFWERDY 1533
#4 GTTACVCA----------DTVYYYQMVPRLTAVLQTAMAAGSLGLLLPGSH 655
#2 NTRRVDNSNTRLAVQIERDPGNDDNNLNSIFYEHLTRTLQESLCGDLVLGRWGNYSSGDC 1335
#3 NTKRVDHSNTRLVTQLDRNPGADDNNLNSIFYEHLTRSLQHTLCGDLVLGRWGNYGPGDC 1386
#1 NTKRVDHSNTRLASQLDRNPGSDDNNLNSIFYEHLTRSLQHSLCGDLLLGRWGNYSTGDC 1593
#4 YLGRFQDRLMWIMILECGYTYCSINIKGLELQETSCHTAEARRVDEVFEDAFEQEYTRVC 715
#2 FILASDDLNAFVHLIEIGNGLVTFQLRGLEFRGTYCQQREVEAIMEGDE----EDRGCCC 1391
#3 FVLASDYLNALVHLIEVGNGLVTFQLRGLEFRGTYCQQREVEAITEGVE----EDEGCCC 1442
#1 FILASDYLNALVHLIEIGNGLVTFQLRGLEFRGTYCQQREVEAITEGVE----EDEGFCC 1649
#4 SLNEHFGNVLT----------PCTVLPVKLYSDARNVLSGIIDSHENLKEFKGDLIKVLV 765
#2 CKPGHLPHLLSCNAAFHLRWLTWEITQTQYILEGYSILDNNAATMLQVFDLRRILIRYYI 1451
#3 CEPGHLPRVLSFNAAFGQRWLAWEVTASKYVLEGYSISDNNAASMLQVFDLRKILITYYV 1502
#1 CEPGHIPHMLSFNAAFSQRWLAWEVIVTKYILEGYSITDNSAASMLQVFDLRKVLTTYYV 1709
#4 WILVQYCSKRPGMKENVHNTENKGKAPLMLPALNTLPPPKSPEDIDSLNSETFNDWSDDN 825
#2 KSIIYYMVTSPKLLSWIKNESLL-------KS---LQP--------------FAKWH--- 1484
#3 KSIIYYVSRSPKLEVWLSHEGIT-------AA---LRP--------------VRVPG--- 1535
#1 KGIIYYVTTSSKLEEWLANETMQ-------EG---LRL--------------CADRN--- 1742
#4 IFD-DEPTIKKVIEEKHQLKDLPGTNLFIPGSVESQRVGDHSTGTVPENDLYKAVLLGYP 884
#2 YIERDLAMFNINIDD-----------------------------------DYVPCLQGI- 1508
#3 YADSD-PTFSLSVDE-----------------------------------DYDLRLSGL- 1558
#1 YVDVD-PTFNPNIDE-----------------------------------DYDHRLAGI- 1765
#4 AVDKGKQEDMPYIPLMEFSCSHSHLVCLPAEWRTSCMPSSKMKEMSSLFPEDWYQFVLRQ 944
#2 --------------------TRASFCNVYLEWIQHCARKRQE--PSTTLDSDEDSPLVT- 1545
#3 --------------------SLPSFCAVHLEWIQYCASRRSQ--P---VDQDWNSPLVT- 1592
#1 --------------------SRESFCVIYLNWIEYCSSRRAK--P---VDVDKDSSLVT- 1799
#4 LECYHSEEKASNVLEEIAKDKVLKDFYVHTVMTCYFSLFGIDNMAPSPGHILRVYGGVL- 1003
#2 -LSFALCTLGRRALGTAAH---------NMAISLDSFLYGLHV----------LFKGDFR 1585
#3 -LCFGLCVLGRRALGTASH---------SMSASLEPFLYGLHA----------LFKGDFR 1632
#1 -LCYGLCVLGRRALGTASH---------HMSSNLESFLYGLHA----------LFKGDFR 1839
#4 PWSVALDWLTEKPELF-QLALKAFRYTLKLMIDKAS-LGPIEDFRELIKYLEEYERDWYI 1061
#2 IT-ARDEWVFADMDLLHKVVAPAIRMSLKLHQDQFTCPDEYEDPAVLYEAIQSFEKKVVI 1644
#3 ITSPRDEWVFADMDLLHRVVAPGVRMALKLHQDHFTSPDEYEEPAALYDAIAANEERLVI 1692
#1 ISSIRDEWIFADMELLRKVVVPGIRMSIKLHQDHFTSPDEYDDPTVLYEAIVSHEKNLVI 1899
#4 GLVSDEKWKEAILQEKPYLFSLGYDSNMG--IYTGRVLSLQELLIQVGKLNPEAVRGQWA 1119
#2 CHEGDPAWRGAVLSNKEELLTLRHVVDEGADEYKVIMLHRSFLSFKVIKVNKECVRGLWA 1704
#3 SHEGDPAWRSAILSNTPSLLALRHVLDDASDEYKIIMLNRRHLSFRVIKVNRECVRGLWA 1752
#1 AHEGDPAWRSAVLANSPSLLALRHVMDDGTNEYKIIMLNRRYLSFRVIKVNKECVRGLWA 1959
#4 NLSWELLYATNDDEERYSIQAHPLLLRNLTVQAAEPPLGYPIYSSKPLHIHLY------- 1172
#2 GQQQELIFLRNRNPERGSIQNNKQVLRNLINSSCDQPLGYPMYVSPLTTSYLGTHRQLKN 1764
#3 GQQQELVFLRNRNPERGSIQNAKQALRNMINSSCDQPLGYPIYVSPLTTSLAGSHPQLRA 1812
#1 GQQQELVFLRNRNPERGSIQNAKQALRNMINSSCDQPIGYPIFVSPLTTSYSDSHEQLKD 2019