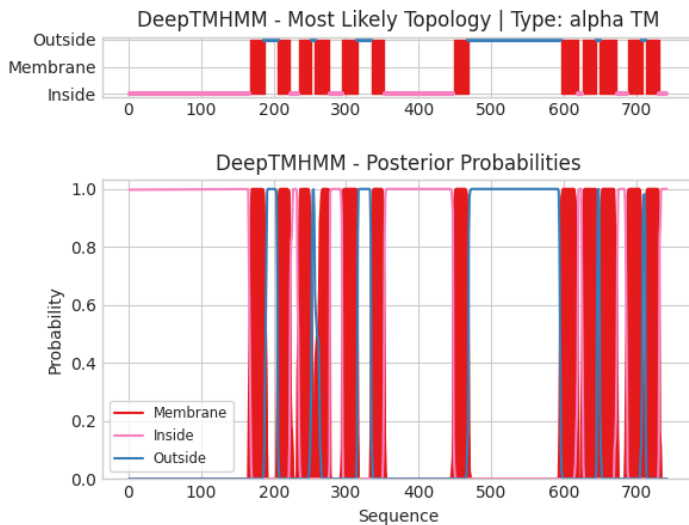


Synaptic vesicle proteins including synaptic vesicle glycoprotein 2 family, synaptophysin, synaptogyrins

SV2A = Synaptic vesicle glycoprotein 2A = SV2A, [Q7L0J3](#), 742aa

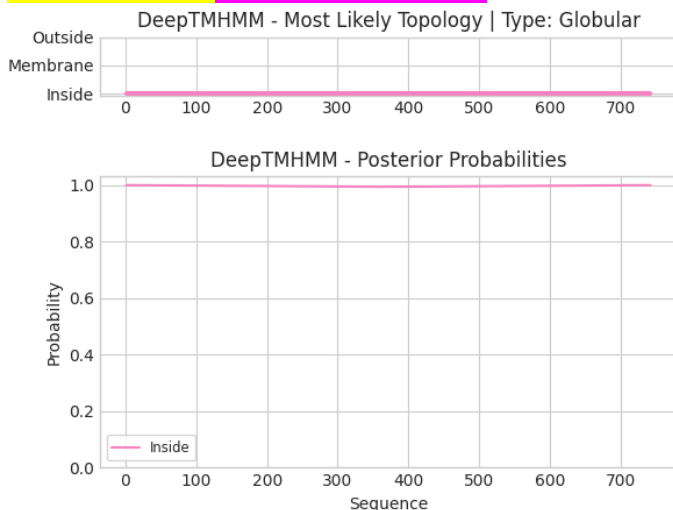
>sp|[Q7L0J3](#)|SV2A_HUMAN Synaptic vesicle glycoprotein 2A

MEEGFRDRAAFIRGAKDIAKEVKKHAAKKVVKGLDRVQDEYSRRSYSRFEEEDDDDDFPAPSDGYRGEQTQDEEEGGASSDATEGHDE
DDEIYEGEYQGIIPRAESGGKGERMADGAPLAGVRGGLSDGEGPPGGRGEAQRRKEREELAQQYEAILRECGHGRFQWTLYFVLGLALMA
DGVEVFVVGFLPSAEKDMCLSDSNKGMGLIVYLGMMVGAFLWGGLADRLGRRQCLLISLSVNSVFAFFSSFVQGYGTFLFCRLLSGV
GIGGSIPIVFSYFSEFLAQEKRGHLSWLCMFWMIGGVYAAAMAWAIIIPHYGWSFQMGSAQFHSWRVFLVCAFPSVFAIGALTTPQE
SPRFFLENGKHDEAWMVLKQVHDTNMRAGHPERVFSVTHIKTIHQEDELIEIQSDTGTWYQRWGVRLSLGGQVWGNFLSCFGPEYRR
ITLMMMGVWFTMSFSYYGLTVWFDPDIRHLQAVDYASRTKVFPGERVEHVTFNFTLENQIHRGGQYFNDKFIGLRLKSVSFEDSLFEEC
YFEDVTSSNTFFRNCTFINTVFYNTDLFEYKFNNSRLINSTFLHNKEGCPLDVTGTGEGAYMVYFVSFLGTLAVLPGNIVSALLMDKIG
RLRMLAGSSVMSCVSCFFLSFGNSESAMIALLCFLGGVSIASWNALDVLTVELYPSDKRTTAFGFLNALCKLA AVLGISIFTSFVGITK
AAPILFASAAALGSSLALKLPETRGQVLQ

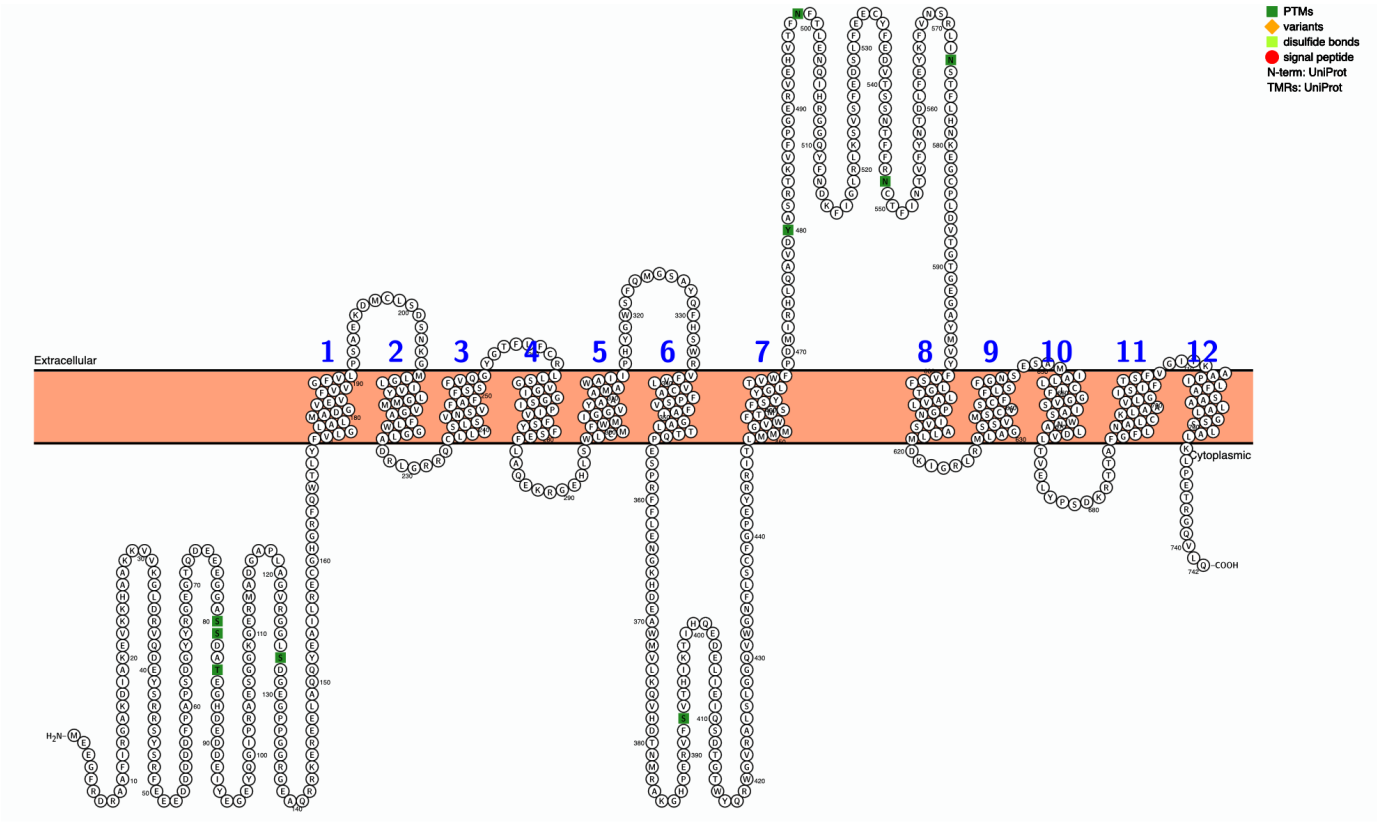


QTY variant, SV2A^{QTY} **L**-> **Q**; **L**, **V** -> **T**; **F** -> **Y** (=QTY code) 112aa difference

MEEGFRDRAAFIRGAKDIAKEVKKHAAKKVVKGLDRVQDEYSRRSYSRFEEEDDDDDFPAPSDGYRGEQTQDEEEGGASSDATEGHDE
DDEIYEGEYQGIIPRAESGGKGERMADGAPLAGVRGGLSDGEGPPGGRGEAQRRKEREELAQQYEAILRECGHGRFQWTLYYTQGQAQMA
DGTETYYTTGYTQPSAEKDMCLSDSNKGMQGGTTYQGMGTGAYQWGGQADRLGRRQCQOTSQSTNSTYAYYSSYTQGYGTFLFCRQSGT
GTGGSTPTTYSYSEYQAQEKRGHLSWQCMYWMGTGTYAAAMAWATTIPHYGWSFQMGSAQFHSWRTYTQTCAYPSTYATGAQTTQPE
SPRFFLENGKHDEAWMVLKQVHDTNMRAGHPERVFSVTHIKTIHQEDELIEIQSDTGTWYQRWGVRLSLGGQVWGNFLSCFGPEYRR
ITQMMMGTYWTMSYSYYGQTTWYPDIRHLQAVDYASRTKVFPGERVEHVTFNFTLENQIHRGGQYFNDKFIGLRLKSVSFEDSLFEEC
YFEDVTSSNTFFRNCTFINTVFYNTDLFEYKFNNSRLINSTFLHNKEGCPLDVTGTGEGAYMVYYSYQGTQATQPGNTTSAQQMDKIG
RLRMQAGSSTMSCTSCYYQSYGNSESAMTAQQCQYGGTSTASWNAQDTQTVELYPSDKRTTAYGYQNAQCKQAATQGTSTYTSYTGITK
AAPTOYASAAQAQGSLLALKLPETRGQVLQ



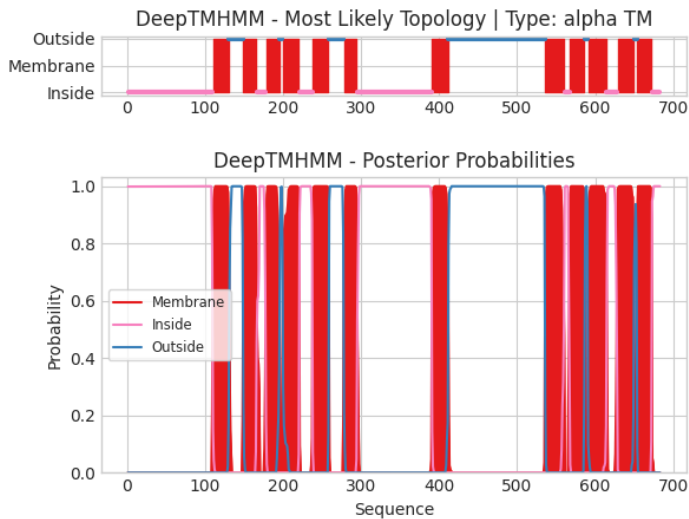
SV2A Protter:



SV2B = Synaptic vesicle glycoprotein 2B = SV2B, [Q7L1I2](#), 683aa

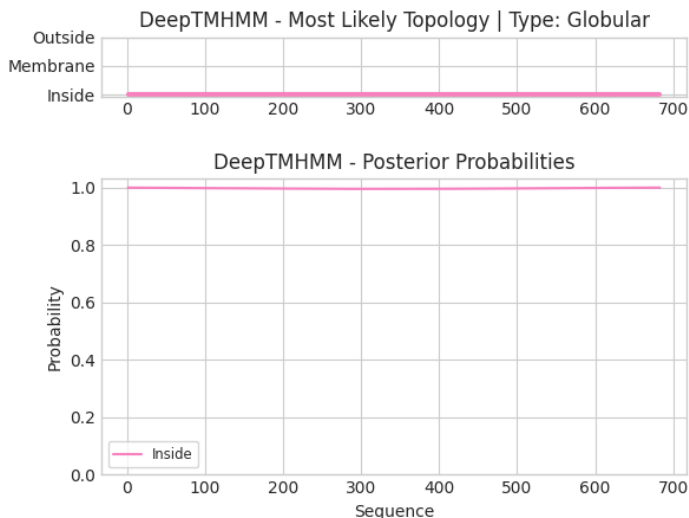
>sp|[Q7L1I2](#)|SV2B_HUMAN Synaptic vesicle glycoprotein 2B

MDDYKYQDNYYGGYAPSDGYIRGNESNPEEDAQSDVTEGHDEEDEIYEGEYQGIPHPDDVKAKQAKMAPSRMDSL RGQTDLMAERLEDEE
QLAHQYETIMDECGHGRFQWILFFVLGLALMADGVEVFVVSFALPSAEKDMCLSSSKKGMGMIVYLGMMAGAFILGGLADKLGRKRVL
SMSLAVNASFASLSSFVQGYGAFLEFCRLISGIGIGGALPIVFAYFSEFLSREKRGEHLSWLGIFWMTGGLYASAMAWSIIIPHYGWGFSM
GTNYHFHSWRVVFIVCALPCTVSMVALKFMPEsprfLLEMKGHDEAWMILKQVHDTNMRAKGTPEKVFTVSNIKTPKQMDDEFIEIQSST
GTWYQRWLVRFKTIFKQVWDNALYCVMGPYRMNTLILAVVWFAMAFSYYGLTVWFPDMIRYFQDEEYKSKMKVFFGEHVVYGATINFTME
NQIHQHGKLVNDKFTRMFKHVLFEDETFDECYFEDVTSTDTYFKNCTIESTIFYNTDLYEHKFINCRFINSTFLEQKEGCHMDLEQDN
DFLIYLVSVFLGSLVLPNGNIISALLMDRIGRLKMIIGGSMLISAVCCFFLFFGNSESAMIGWQCLFCGTSIAAWNALDVIITVELYPTNQR
ATAFGILNGLCKFGAILGNTIFASFVGITKVVPILLAAASLVGGGLIALRLPETREQVLM

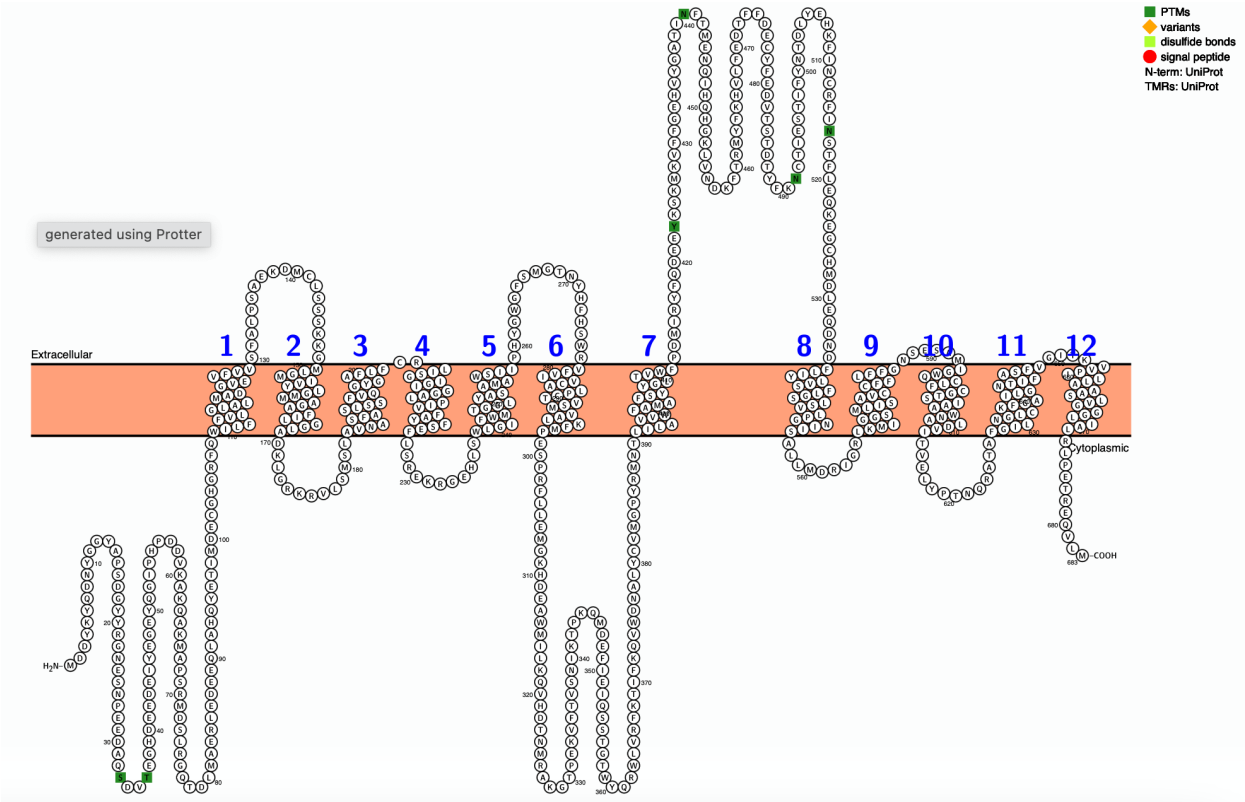


QTY variant, SV2B^{QTY} **L**->**Q**; **I, V** ->**T**; **F** ->**Y** (=QTY code) 117aa difference

MDDYKYQDNYYGGYAPSDGYIRGNESNPEEDAQSDVTEGHDEEDEIYEGEYQGIPHPDDVKAKQAKMAPSRMDSL RGQTDLMAERLEDEE
QLAHQYETIMDECGHGRFQWTQYYTQGGQAQMAADGTETYYTTSFALPSAEKDMCLSSSKKGMQGMTTYQGMMAGAYTQGGQADKLGRKRVL
SMSQATNASYASQSSYTQGYGAYQYCRQTS GTGTGGAQPTTYAYYSEYQSREKRGEHLSWQGTYWMTGGQYASAMAWSTTTPHYGWGFSM
GTNYHFHSWRTYTTTCAQPCTTSMTAQKYMPEsprfLLEMKGHDEAWMILKQVHDTNMRAKGTPEKVFTVSNIKTPKQMDDEFIEIQSST
GTWYQRWLVRFKTIFKQVWDNALYCVMGPYRMNTQTQATTWYAMAYSYYGQTTWYFPDMIRYFQDEEYKSKMKVFFGEHVVYGATINFTME
NQIHQHGKLVNDKFTRMFKHVLFEDETFDECYFEDVTSTDTYFKNCTIESTIFYNTDLYEHKFINCRFINSTFLEQKEGCHMDLEQDN
DYQTYQTSYQGSQSTQPGNTTTSALLMDRIGRQKMTGGSMQTSATCCYYQYYGNSESAMTGWQCQYCGTSTAAWNAQDTTTVELYPTNQR
ATAYGTQNGQCKY GATQGNNTTYASYTGITKTTPTQQAASQTGGGQTAQRLPETREQVLM



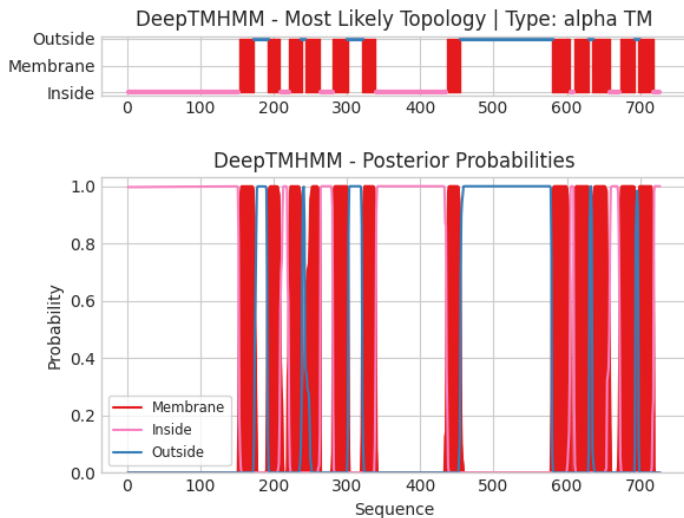
SV2B Protter:



SV2C = Synaptic vesicle glycoprotein 2C = SV2C, [Q496J9](#), 727aa

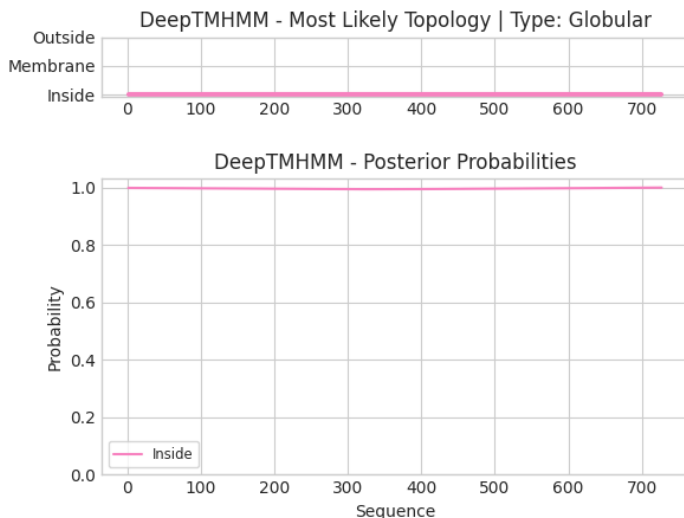
>sp|[Q496J9](#)|SV2C_HUMAN Synaptic vesicle glycoprotein 2C

MEDSYKDR TSLMKGAKDIAREVKKQT VKKVNQAVDRAQDEYTQRSYSRFQDEEDDDDDYYPAGETYNGEANDDEGSSEATEGHDEDEIY
EGEYQGIPSMNQAKDSIVSVGQPKGDEYKDRRELESERRADEEELAQQYELIIQECGHGRFQWALFFVLGMALMADGVEVFVVG FVLPS
AETDL CIPNSGSGWLGSI VYLGMMVGAFFWGG LADKVG RKQSL LICMSVNGFFAFLSSFVQGYGFFLFCRLLSGFGIGGA IPTVFSYFA
EVLAREKRGEHLSWLCMFWMIGGIYASAMAWAIIIPHYGWSFSMGSA YQFHSWRV FVIVCALPCVSSVVALTFMPESPRFLLEVKGHDEA
WMILKLIHDTNMRARGQPEKVFTVNKIKTPKQIDELIEIESDTGTWYRRCFVRIRTELYGIWLT FMRCFNYPVRDNTIKLTIVWFTLSF
GYYGLSVWF PDVIKPLQSDEYALLTRNVERDKYANFTINFTMENQIHTGMEYDNGRFIGVKFSVTFKDSVFKSCTFEDVTSVNTYFKN
CTFIDTVFDNTDFEPYKFIDSEFKNCSFFHNKTGCQITFDDDYSA YWIIYFVNFLGTLAVLPGNIVSALLMDRIGRLTMLGGSMVLSGIS
CFFLWFGTSESMIIGMLCLYNGLTISAWNSLDVVTVELYPTDRRATGFGFLNALCKAAAVLGNLIFGSLVSITKSIPI LLASTVLVCGG
LVGLCLP DTRTQVLM

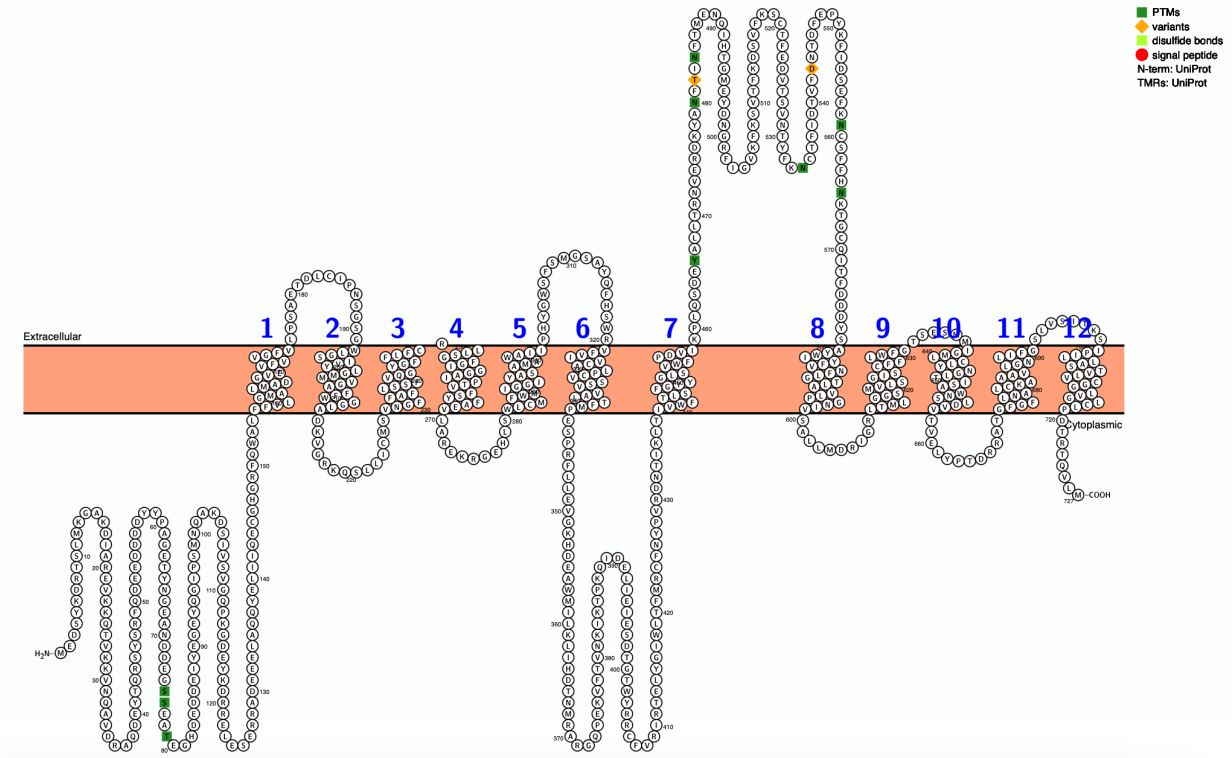


QTY variant, SV2C^{QTY} **L**-> **Q**; **I, V**-> **T**; **F**-> **Y** (=QTY code) 120aa difference

MEDSYKDR TSLMKGAKDIAREVKKQT VKKVNQAVDRAQDEYTQRSYSRFQDEEDDDDDYYPAGETYNGEANDDEGSSEATEGHDEDEIY
EGEYQGIPSMNQAKDSIVSVGQPKGDEYKDRRELESERRADEEELAQQYELIIQECGHGRFQWALQYYTQGMADGTET YTTGYTQPS
AETDL CIPNSGSGWQGSTTYQGMMTGAYYWGQADKVG RKQSL LICMS TNGYYAYQSSYTQGYGY YQYCRQSGYGTGGATPTTYSYYA
ETQAREKRGEHLSWQCMYWM TG GTYASAMAWATT PHYGWSFSMGSA YQFHSWRTYTTTCAQPC TSSTTAQTYMPESPRFLLEVKGHDEA
WMILKLIHDTNMRARGQPEKVFTVNKIKTPKQIDELIEIESDTGTWYRRCFVRIRTELYGIWLT FMRCFNYPVRDNTIKLT TTWYTQSY
GYYGQSTWY P DTTK PQSDEYALLTRNVERDKYANFTINFTMENQIHTGMEYDNGRFIGVKFSVTFKDSVFKSCTFEDVTSVNTYFKN
CTFIDTVFDNTDFEPYKFIDSEFKNCSFFHNKTGCQITFDDDYSA YWTYYTNYQGTQATQPGN TT SALLMDRIGRQTMQGGSM TQSGTS
CYYQWYGTSESMI TGMQCQYNGQT T SAWNSQD TTTVELYPTDRRATGYGYQNAQCKAAATQGNQTYGSQTSITKSTPTQQASTTQTCGG
QTGQCQPDTRTQVLM



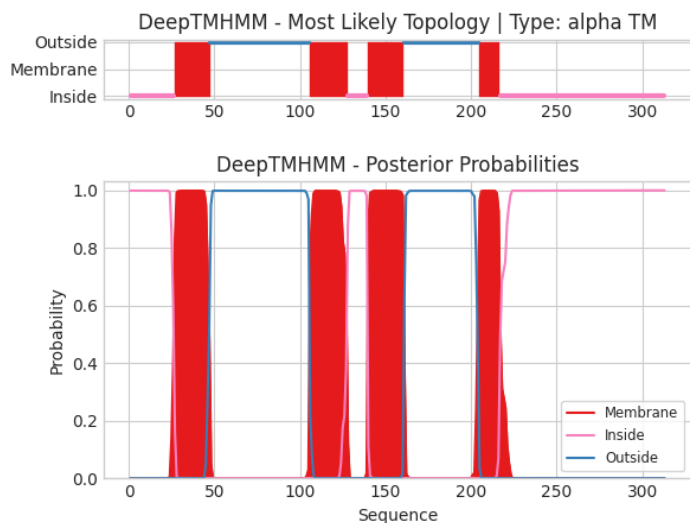
SV2C Protter:



SYP = Synaptophysin = SYPH, [P08247](#), 313aa

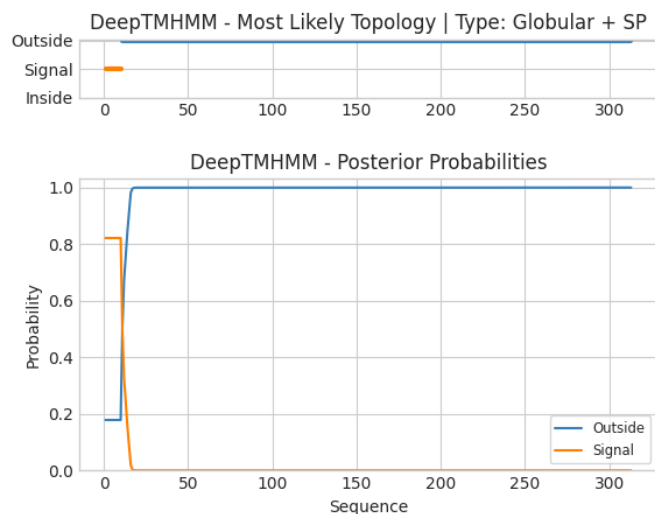
>sp|[P08247](#)|SYPH_HUMAN Synaptophysin

MLLLADMDVVNQLVAGGQFRVVKEPLGFKVLQWVFAIFAFATCGSYSGELQLSVDCAKTESDLSIEVEFEYPFRLHQVYFDAPTCRG
GTTKVFLVGDYSSSAEYFVTVAVFAFLYSMGALATYIFLQNKYRENNKGPMLDFLATAVFAFMWLVSSSAWAKGLSDVKMATDPENIIK
EMPVCRQTGNTCKELRDPVTSGLNTSVVFGFLNLVLWVGNLWFVFKETGWAAPFLRAPPGAPEKQPAPGDAYGDAGYGQGPGGYGPQDS
YGPQGGYQPDYGPAGSGGSGYGPQGDYGPQGGYGPQGAPTSFSNQ

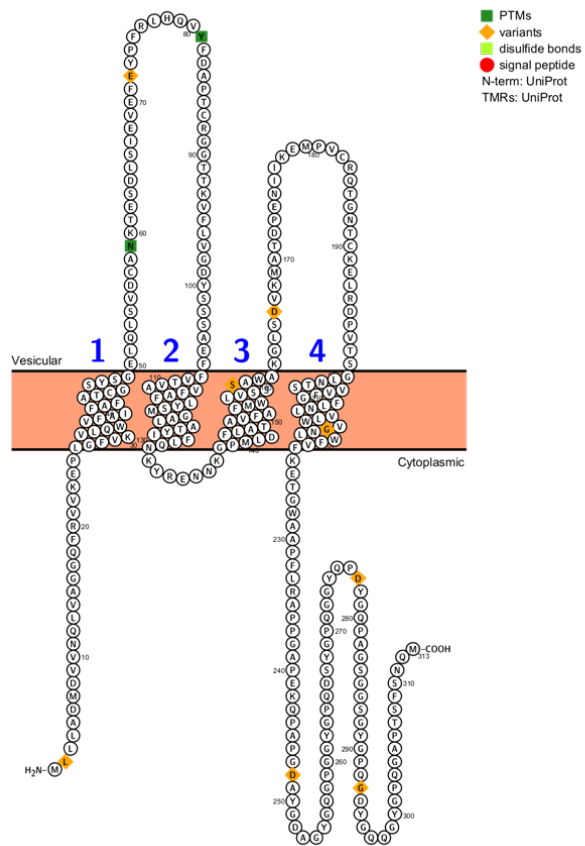


QTY variant, SYP^{QTY} L-> Q; I, V -> T; F -> Y (=QTY code) 44aa difference

MLLLADMDVVNQLVAGGQFRVVKEPQGYTKTQQWTYATYATCGSYSGELQLSVDCAKTESDLSIEVEFEYPFRLHQVYFDAPTCRG
GTTKVFLVGDYSSSAEYTTTATYAYQYSMGAQATYTYQNKYRENNKGPMDYQATATYAYMWQTSSSAWAKGLSDVKMATDPENIIK
EMPVCRQTGNTCKELRDPVTSQNTSTTYGYQNQTQWTGNQWYTYKETGWAAPFLRAPPGAPEKQPAPGDAYGDAGYGQGPGGYGPQDS
YGPQGGYQPDYGPAGSGGSGYGPQGDYGPQGGYGPQGAPTSFSNQ



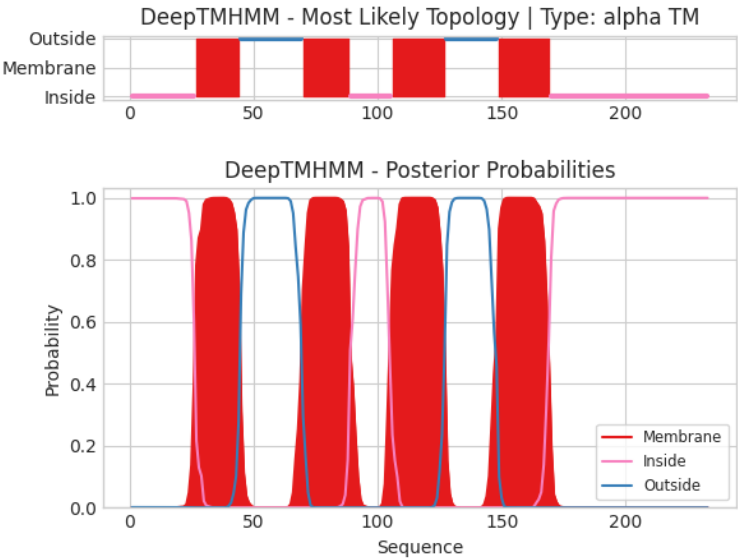
SYP Protter:



SYNGR1 = Synaptogyrin-1 = SNG1, [O43759](#), 233aa

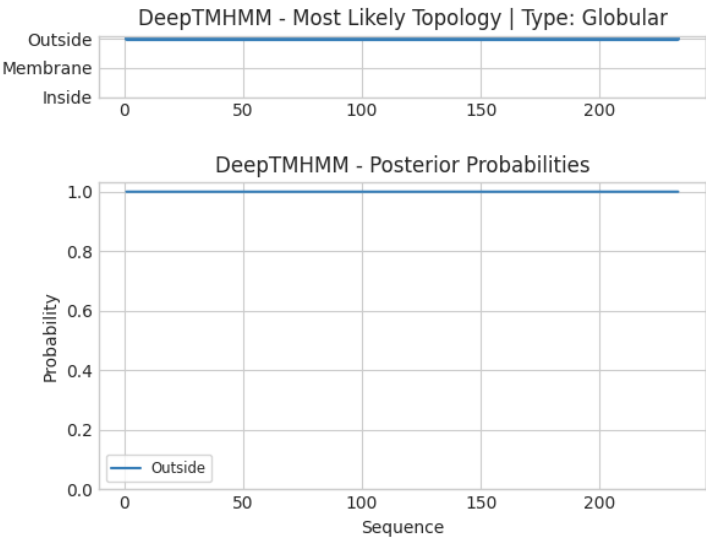
>sp|[O43759](#)|SNG1_HUMAN Synaptogyrin-1

MEGGAYGAGKAGGAFDPYTLVRQPHTILRVVSWLFSIVVFGSIVNEGYLNSASEGEEFCIYNRNPACSYGVAVGVLAFLTCLLYLALD
VYFPQISSVKDRKKAVLSDIGVSAFWAFLWFVGFYLANQWQVSKPKDNPLNEGTDAARAAIAFSFFSIFTWAGQAVLAFQRYQIGADS
ALFSQDYMDPSQDSSMPYAPYVEPTGPDPAAGMGTYQQPANTFDTEPQGYQSQGY

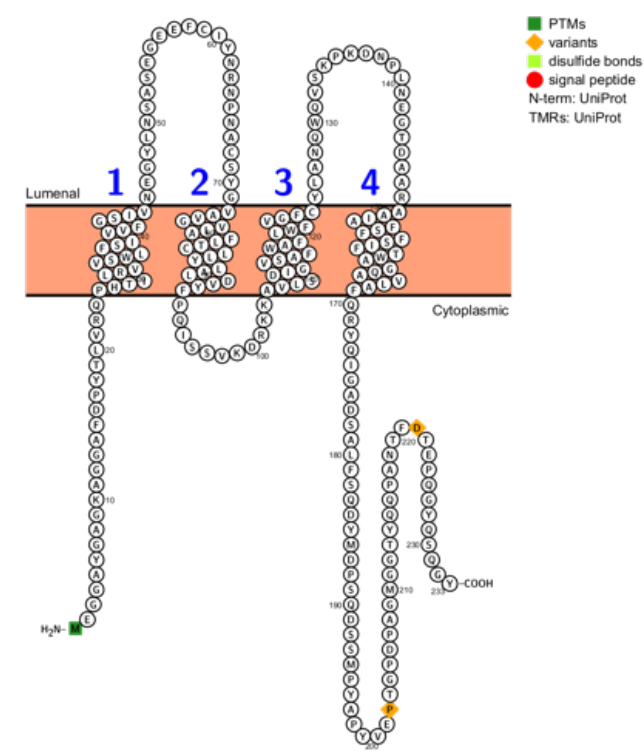


QTY variant, SYNGR1^{QTY} **L**-> **Q**; **I**, **V** -> **T**; **F** -> **Y** (=QTY code) 43aa difference

MEGGAYGAGKAGGAFDPYTLVRQPHTTQRTTSWQYSTTTYGSTTNEGYLNSASEGEEFCIYNRNPACSYGTATGTQAYQTCQQYQAQD
TTYFPQISSVKDRKKATQSDTGTSAYWAYQWYTGICYLANQWQVSKPKDNPLNEGTDAARAATAYSYYSTYTWAGQATQAYQRYQIGADS
ALFSQDYMDPSQDSSMPYAPYVEPTGPDPAAGMGTYQQPANTFDTEPQGYQSQGY



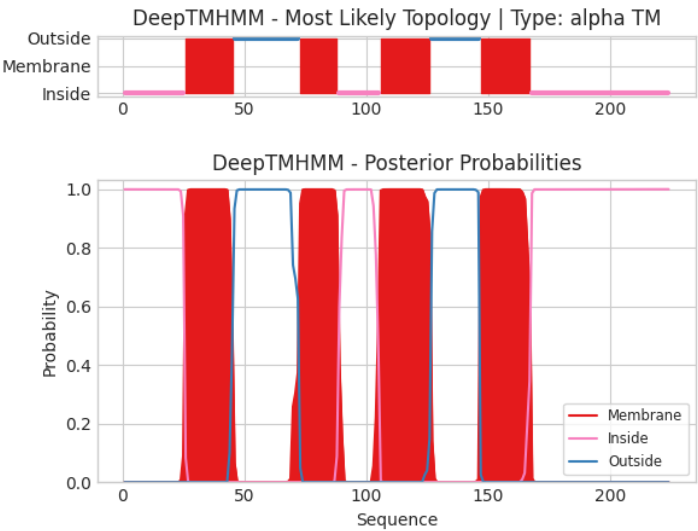
SYNGR1 Protter:



SYNGR2 = Synaptogyrin-2 = SNG2, [O43760](#), 224aa

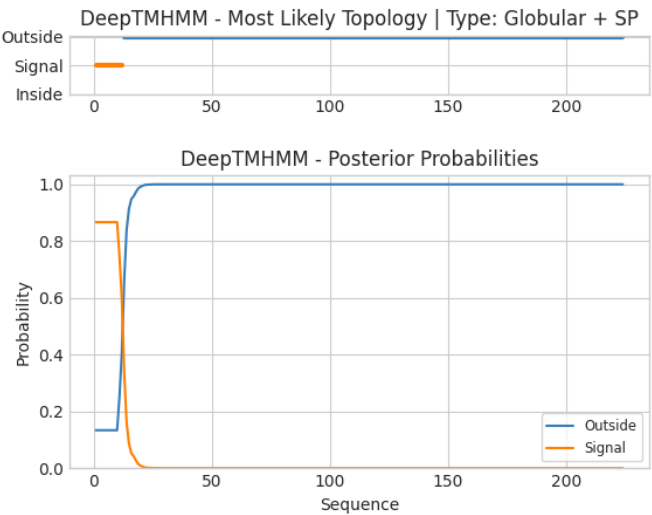
>sp|[O43760](#)|SNG2_HUMAN Synaptogyrin-2

MESGAYGAAGAGGSFDLRRFLTQPQVVARAVCLVFALIVFSCIYGEYSNAHESKQMYCVFNRNEDACRYGSAIGVLAFLASAFFLVVD
AYFPQISNATDRKYLVIGDLLFSALWTFWVVGFCFLTINQWAVTNPKDVLVGADSVRAAITFSFFSIFSWGVLASLAYQRYKAGVDDFI
QNYVDPTPDPNTAYASYPGASVDNYQQPPFTQNAETTEGYQPPPVY

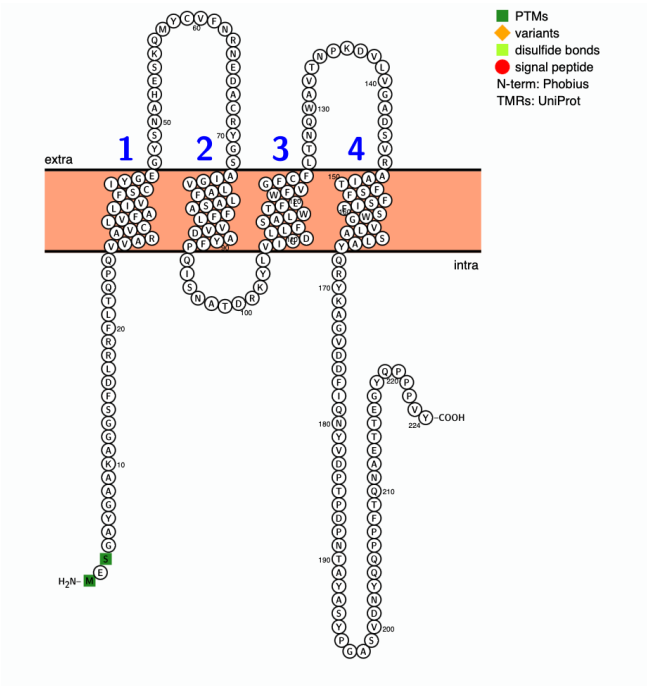


QTY variant, SYNGR2^{QTY} **L**-> **Q**; **I**, **V** -> **T**; **F** -> **Y** (=QTY code) 45aa difference

MESGAYGAAGAGGSFDLRRFLTQPQT**T**TARAT**C**Q**T**YA**Q**TT**S**CTYGEYSNAHESKQMYCVFNRNEDACRYGSATGT**Q**AY**Q**ASAY**Y**QTTD
AY**Y**FPQISNATDRKY**Q**TTGD**Q**Q**Y**SA**Q**WT**Y**QW**Y**TG**Y**C**Y**QTNQWAVTNPKDVLVGADSVRAAT**T****Y****S****Y**ST**Y**SWG**T**QAS**Q**AYQRYKAGVDDFI
QNYVDPTPDPNTAYASYPGASVDNYQQPPFTQNAETTEGYQPPPVY



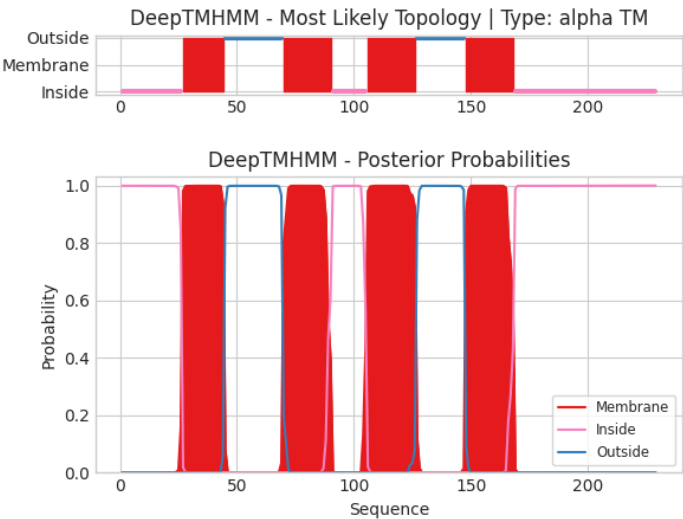
SYNGR2 Protter:



SYNGR3 = Synaptogyrin-3 = SNG3, [O43761](#), 229aa

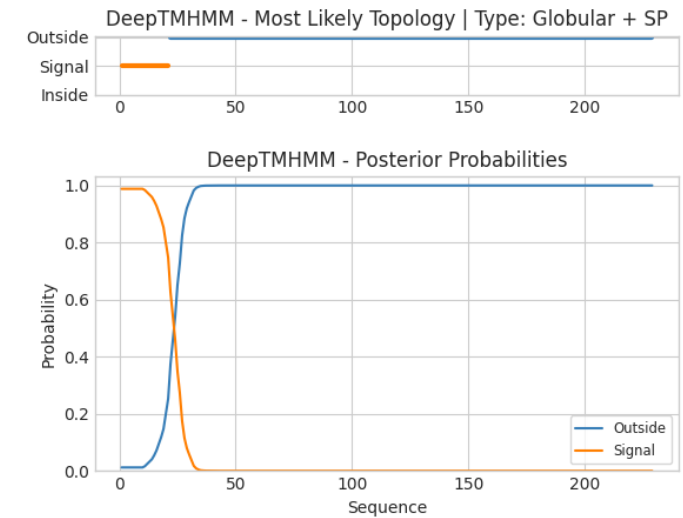
>sp|[O43761](#)|SNG3_HUMAN Synaptogyrin-3

MEGASFGAGRAGAALDPVSFARRPQTLLRVASWVFSIAVFGPIVNEGYVNTDSGPELRCVFNGNAGACRFGVALGLGAFLACAAFLLLD
VRFQQIISVRDRRAVLLDLGFSGLWSFLWFVGFCFLTNQWQRTAPGPATTQAGDAARAAIAFSFFSILSWVALTVKALQRFRLGTDMS
LFATEQLSTGASQAYPGYPVGSGVEGTETYQSPFFTETLDTSPKGYQVPAY

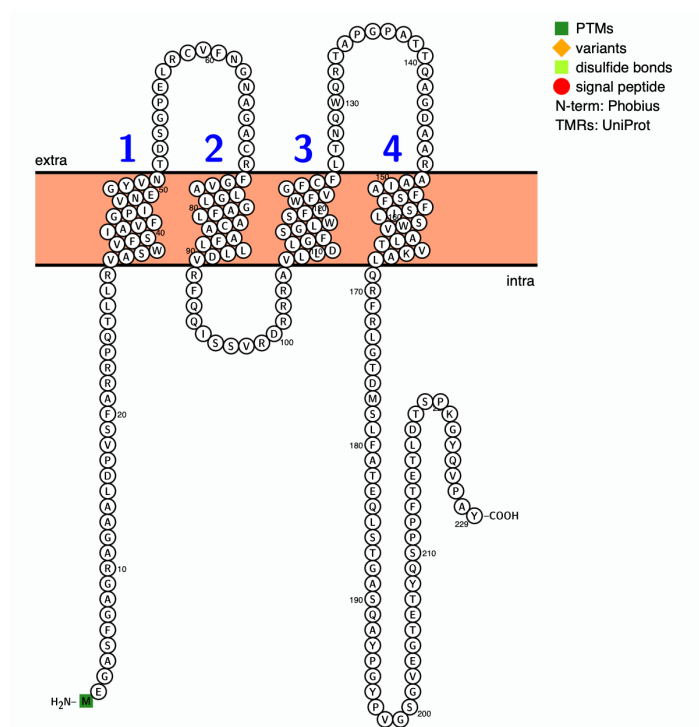


QTY variant, SYNGR3^{QTY} **L**-> **Q**; **I**, **V** -> **T**; **F** -> **Y** (=QTY code) 44aa difference

MEGASFGAGRAGAALDPVSFARRPQTQORTASWTYSTATYGPITNEGYVNTDSGPELRCVFNGNAGACRYGTAQGQGAYQACAAYQQQD
VRFQQIISVRDRRAVLLDLGFSGLWSFLWFVGFCFLTNQWQRTAPGPATTQAGDAARAAATAYSYYSTQSWTAQTTKAQQRFLGTDMS
LFATEQLSTGASQAYPGYPVGSGVEGTETYQSPFFTETLDTSPKGYQVPAY



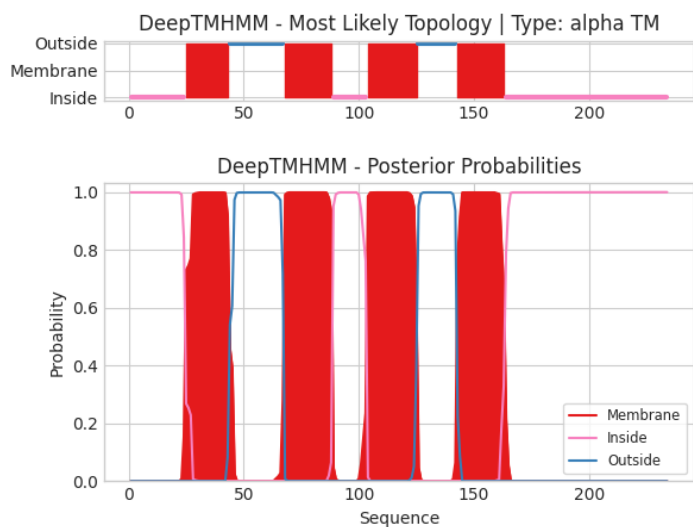
SYNGR3 Protter:



SYNGR4 = Synaptogyrin-4 = SNG4, [O95473](#), 234aa

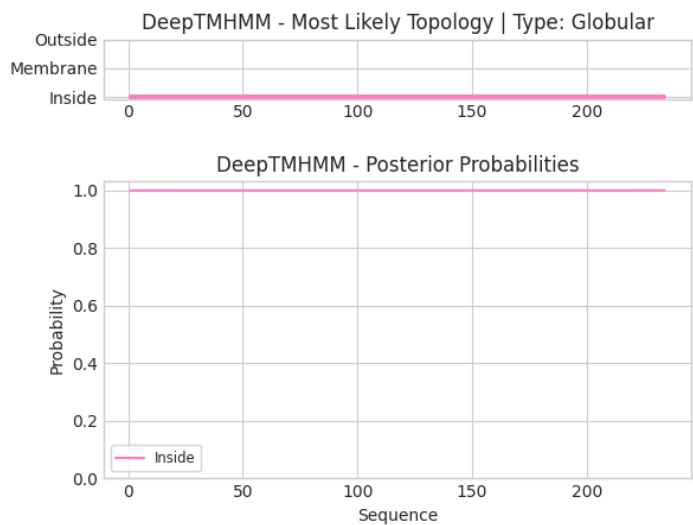
>sp|[O95473](#)|SNG4_HUMAN Synaptogyrin-4

MHIPKSLQELANSEAVQFLRRPKTITRVFEGVFSLIVFSSLLTDGYQNKMESPOLHCILNSNSVACSFVAGAGFLAFLSCLAFLVLDTQ
ETRIAGTRFKTAFQLLDFILAVLWAVVWFMGFCFLANQWQHSPKFEFLGSSSAQAATAFTFFSILVWIFQAYLAFQDLRNDAPVPYKR
FLDEGGMVLTTPLPSANSPVNMPTTGPNSLSYASSALSPCLTAPKSPRLAMMPDN



QTY variant, SYNGR4^{QTY} L-> Q; I, V -> T; F -> Y (=QTY code) 47aa difference

MHIPKSLQELANSEAVQFLRRPKTTTRTYEGTYSQTTYSSQQTGQYQNKMESPOLHCILNSNSTACSYATGAGYQAYQSCQAYQTQDTQ
ETRIAGTRFKTAFQQQDYTQATQWATTWYMGYCYQANQWQHSPKFEFLGSSSAQAATAFTYYSTQTWTYQAYQAYQDLRNDAPVPYKR
FLDEGGMVLTTPLPSANSPVNMPTTGPNSLSYASSALSPCLTAPKSPRLAMMPDN



SYNGR4 Protter:

