

(a)

TRANSMEMBRANE REGION

BlaspTom70	1	-----MSSNNQAK-----	VVTAVAAVGVA	AVVYFF-----	KSRKSQKKSEAPKEEEKPKQEF	PGKVEGKVEFPGKVEGDKKEFPGKVEGKVEFPGKVEGKKEFPGKVE
Esi0007_0019	131	-----TADLATIGSSLL--	GAGAVYTPGPQ-----	QAGRRGGRGGGAPLC---	DGTPRQPSRAGHAGRCSSSPAGDGDSSCAGENNKCSTAGRAEGGGGGGGG	
Esi0232_0002	32	GPRREGGRWRMDQSKLAVLGT	VGLVATAAVCCAIVFSGRFSF	-----	AGSSTGKPFASSPGTTADAQ	GVAASNKVIDDEDDDKLTGGVSTEKGTGKGDSGGGDGSRAAPGSGG-
PhatrTom70	1	-----MALGTRSN-Q----	TLVVGLAAAATASLLLYYV	-----	QARTRPTS-----	DSSPRDTTDRKSRS-----VEFTTPSPKKTSGPLTKAVG-
PhyinTom70	1	-----MEQHAILQ-----	VAVLASLATISAFVAFSLY	-----	HKRQQQ-----	FEIAKQPEVVVSTPEAQP-
PicpaTom70	4	QSFWNSTVKFVSSHKA-----	VITLTTIAGA--	STLAYLY-----	ATNATSKP-----	DSSATGSSKNKKKKSKKQTAPETSNAD-
SacceTom70	1	-----MKSFITRNKT-----	AILATVAATGT--	AIGAYYYY-----	NQLQQQQ-----	RGKKNTINKDEKDKDSQKETEGAKKSTAPSNP-
NaucaTom70	8	-----VGGFLTRNRT-----	AIVATVAAGSA--	AIGAFYYY-----	HHLQQTHT-----	SLEGEEDGNSTGRNPVND AHL SKNQKKKQ RKKHKKKATPDQTT
NeucrTom70	24	SSIWDRVSNWVSEHKA-----	VVYTIAGVSVVITTAGVYYL	-----	RKGSEQKE-----	SGPKLSKKERRRK---QAEKGAEKASTSKTEEAAPTQPKAA-
AspniTom70	27	ASVWDRISKWVSENKA-----	LVYTVAGVAVVTSAGVYYL	-----	SDSSRSGK-----	PSPTTPAPTEKKKKKSGSQRRKEKKAEEERKSKAASVQDEKTEKK-
TriadTom70	13	GGSLANLSKW----Q-----	VALLLGVG-----	GVGAAYYYY-----	-----	RRGQSSIAARQPQQAD-
NemveTom70	8	----SGLEKW----Q-----	IALLIGAPVAVVCVAGAVWYW	-----	RNSQ-----	EGEEGEREDEEKGN-
DanreTom70	13	----SGLPRW----Q-----	LALLVGTPIVL--	GVGAVYLV-----	NRSRAKEK-----	QGKRNGERKTPEGSA-
HomsaTom70	30	GPGTGGLPRW----Q-----	LALAVGAPLLL--	GAGAIYLV-----	SRQRRRE-----	ARGRGDASGLKRNSERKTPEGRA-
XenlaTom70	13	----PGIPHW----K-----	LALAVGAPLLV--	GAGAVYLV-----	RRHK-----	AAKSDKQRRTPEGSA-

TPR1

BlaspTom70	329	APAKKPAE	FVTFYNEAKRQF-----	-----	NNQEYEAALSNFNKAIDAIPKN	NAQ-----	-----	LKT	LIYSRGSLKLLNRQEEA
Esi0007_0019	353	ACSES---	PTAADGDDTSLCERPAACLEFLLTSQAVRVRADESMERGLDKEAAASLKEANILMEAFLEEGQRLPRP	-----	-----	-----	-----	SRH--	LAE LRAGLAKCEMRGGDLEAA
Esi0232_0002	164	DGEALIVR	FNANSKAKKLF-----	-----	TGQRYALAAEQYGIALELCDEL	PNHD-----	-----	NKRTA	LHNNRGAAYEKDGQYALA
PhatrTom70	94	EKEVN-AK	IELLDKKGKDLF-----	-----	KNKQYLDAAETFTALTLIETS	DTSGSVQNTSSSLHRQLIT	-----	-----	LLNNRSAMYEGKGNQPELA
PhyinTom70	74	KPTPAANI	GEQEATLATKKY-----	-----	KAGDYDGAVELYSVAISKCEQP	QPLDA-----	-----	RNLKV	MYSNRAAAEYKLEDYENV
PicpaTom70	97	EKNW---	AQSLKETGNRAF-----	-----	KSDDYETALEYNLALLCKKDD	-----	-----	A	FYSNSSACWACLGGDNQKV
SacceTom70	93	EKDKY---	ALALKDKGNQFF-----	-----	RNKKYDDAIKYNNWALELKEDP	-----	-----	V	FYSNLSACYVSVGDLKKV
NaucaTom70	117	EKKKI---	SMQLKDKGNKYF-----	-----	KAKDYTNAIKYYNLALDLNKDP	-----	-----	I	FYSNISACYVSLGQLDKV
NeucrTom70	131	ERKAY---	AAKLKELGNKAY-----	-----	GSKDFNKALDLYSKAIICKPDP	-----	-----	V	YYSNRAACHNALAQWEQV
AspniTom70	134	TRKAY---	AAKLKAAGNKAY-----	-----	GAKDYPRAIELYGKAILCKPDP	-----	-----	V	FYSNRAACYNVQSEWEKV
TriadTom70	79	ER-----	ASAVKGKGNKFF-----	-----	KGGKYEQAIRCYTEAIELCPSS	ESDI-----	-----	RSV	LYQNRAAAEYQLKEFDKV
NemveTom70	77	EQ-----	AQVAKLKGNKYF-----	-----	KGCKYEQAICYTEAIELCPPE	NKQD-----	-----	LST	FYQNRAAAEYQMNQFENV
DanreTom70	82	DR-----	AQSAKNKGNKYF-----	-----	KAGKYDHAICYTEAIGLCPKE	KKGD-----	-----	LST	FYQNRAAAEYQMKWTEV
HomsaTom70	111	DR-----	AQAAKNKGNKYF-----	-----	KAGKYEQAIQCYTEAISLCPT	KNVD-----	-----	LST	FYQNRAAAFEQLQKWKEV
XenlaTom70	79	EK-----	AQAAKNKGNKYF-----	-----	KASKYEQAICYTEAISLCPAH	NKSD-----	-----	LST	FYQNRAAAHEQSQNWEV

TPR2

TPR3

BlaspTom70	IADYTQCITLDDKY	S	RAYKARAGVYKSLDRLEEAT	EDFSYCYLLDTV	SSG-----	-----	DMQMTPEGMD	DEVIQALAKRDAKAELARRH	-----	AD-KEYKRHL	PSKQ-
Esi0007_0019	IAHAEEAALAEHPAC	G	EAFLIRGQCRRELGDNGGAL	RDLVNAFVLQGN	AL-----	-----	NNAGDGSEAQAI	EDVSRESCRARAGEEFSQRA	-----	APNA-----	LPADW-
Esi0232_0002	LADCSMCLSREVGK	K	FARVRKSRVLEAMGKHEEAL	SEVCAHL LERD	RVQAKAALNPSEPLTPPAPPAN	LEGLLQKVASKRADAILL	EREQTAEKQEA	AAAAGGAGTGTE-K-LKPLVKQ	-----	-----	-----
PhatrTom70	LEDCTQILDQDVHH	A	KARTRKLRLVESLGRWHDAL	VEVCAVQLLFMR	KHRDSMRLGLKVP-PPVPESKM	QEILTNVPLEMEPIQALN	-----	-----	EK---	TTRPL	PSGY-
PhyinTom70	VADCTKALKDKRH	P	KSYLRRAKARANAGDLRGS	LDVYVCLLVISEE	-----	-----	KQEQVDENLAQE	ISRIHSDITAKEIEDAQ	-----	QNKQNPTRYL	PDQF-
PicpaTom70	IEFSTKALELKPDI	A	KCLMRRAAAYEKIEEYKAL	YDLTWTLYEST	I-----	-----	ADKSIQSMLE	ERITTKQANYVEKQLKDFV	-----	PQ-----	LPSAS-
SacceTom70	VEMSTKALELKPDI	S	KVLLRRASANEGLGKFADAM	FDLSVLSLNGDF	-----	-----	NDASIEPMLERN	LNKQAMSKLKEKFGDIDTATATPT	ELSTQPAKERKDKQENL	PSVT-	-----
NaucaTom70	IESSTKALELNPNY	S	KALLRRASANESLENYSDAL	FDLSVLSLNGDY	-----	-----	SGASIEPTILERN	LNKQAIKVNERNMNMKT	-----	GS-NKEQQL	PSST-
NeucrTom70	VADTTAALKLDPHY	V	KALNRRANAYDQLSRYSDAL	LDFTASCIIDGF	-----	-----	RNEQSAQAVERL	LKKFAENKAKEILETKP	-----	PK-----	LPSST-
AspniTom70	VEDTSAALAMDSEY	V	KALNRRAIAYEHLEKYSEAL	LDFTASCIIDGF	-----	-----	SNEVSRVALERL	LKKVAKERKKEILEAKG	-----	KK-----	LPSPT-
TriadTom70	VEDCNSALELNKHY	V	KAINRRSRAYEELKEYRKCL	EDLTACQILES	-----	-----	QNAATIMSADRV	LKIVGKIEAKQRFERQ	-----	YF-----	LPSTA-
NemveTom70	VEEATKALELNSKY	T	KALMRRARALEKLERKQEC	LQDLTAVCTLEGF	-----	-----	SNPSWMMHADRV	LKDIGRQKAKEHFKNRK	-----	PT-----	IPSPT-
DanreTom70	IQDCSQAVELNPRY	V	KALFRRAKALEKLDNKKEC	LEDVAVCTLEVF	-----	-----	QNQQSMLLADKVL	LKLLGKEKAKEKYKNRE	-----	PL-----	MPSPQ-
HomsaTom70	AQDCTKAVELNPKY	V	KALFRRAKAHEKLDNKKEC	LEDVAVCTLEGF	-----	-----	QNQQSMLLADKVL	LKLLGKEKAKEKYKNRE	-----	PL-----	MPSPQ-
XenlaTom70	VEDCTKAVELNPRY	V	KALFRRAKAHEKLDNKKEC	LEDVAVCTLEGF	-----	-----	QNQQSMFLADKVL	LKLLGKEKAKDKYKNRE	-----	PL-----	MPSPQ-

TPR4

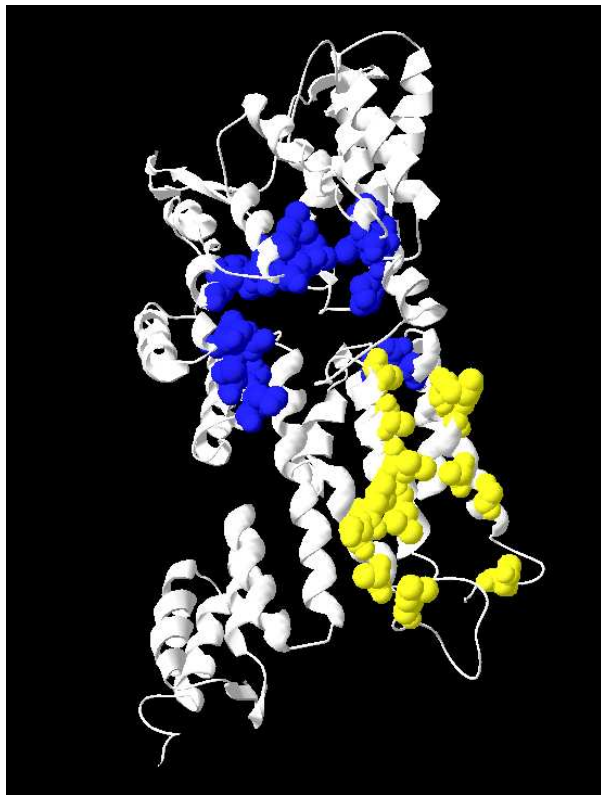
BlaspTom70	FVAFYFSTI-----	-----	ASEKAAEYNPSKFTEQYLAELIA	-----	APQGDAT---	VGDYLLMRGGLRKA-EQRYEEAMAD	FLEA	A-----	-----	KEESHCHAQ----	ADA	
Esi0007_0019	VVRSFLTSYDTKGLYEE	-----	HDAVFRLHG-----	-----	EDPVAAAAA	EGDEGGQAAAVTEFWQGLSLVREG-	---KYAESIAKFSSS	VSAFSSSAPVAVLGEGTGAGD	TTTR-IQ	SLA	-----	
Esi0232_0002	VVMELLSRFGSFAQLERRYK	GMEETAITRELKDAEKAGKEG	DGSASATTTASRV	S	SLLDRGL---	LRMVKRNVDGAREDIFEAAELL	STLTEAD	P-----	-----	SEAGADEVP	PHVK ASV	
PhatrTom70	TILQLLSRSTSYNSWMA	-----	QAADGNVANIDKELVEGVDA	AASKAQRVH	VLLKRGR---	RHYVDRAFENASDDFEQAYALA	ETNEVQL	L-----	-----	LEGDDY-----	ARV	
PhyinTom70	FVTSYYSFHF-----	-----	PSDDENDVVAEKSSSEY	TTLHLEAGDD	TRQQRGW---	LLTKRGLALKKEKDYDMAAKDL	DAACKLV	E-----	-----	PEDEAY-----	YTA	
PicpaTom70	SIASLLGSFT-----	-----	EDSVSDVFGTEIPEDGSG	-----	D	KFLYEAL---	QDFKTATADSYEHA-DVALN	QAVSKYADV	T-----	-----	VSSDETTKRRR-AMA	
SacceTom70	SMASFFGIFK-----	-----	PELTFANYD-----	ESHEAD	KELMNGL---	SNLYKRSPEYDKA-DESFTKAARL	FEEQ	L-----	-----	DKNNEDEKL	KEKL AIS	
NaucaTom70	SLVSFFGIFD-----	-----	PELTFQNYN-----	ENDQAD	VELLTGL---	TNLFKRTDQGYLDA-DKNFVK	ASSLFMEE	L-----	-----	AKNPDKHLL	LEKT AIA	
NeucrTom70	FVGNYLQSFR-----	-----	SKPRPEGLE-----	DSVE	LSEETGL---	GQLQLGLKHLESKT-GTGYEEG	SAAFKA	L-----	-----	DLGELGPHE----	ALA	
AspniTom70	FVSNYLQSFR-----	-----	PKSLPEGLD-----	ESAD	IPEESGK---	GQLRKGLLAMAKKT-GDGYEEA	AAAFVKA	L-----	-----	ELGDLGEFE----	GLA	
TriadTom70	FIQTYLESFA-----	-----	NGKKNNDIILNF-----	-----	TTAFED---	DYF---	LIARYNLS-QCNYENIIDYCTKE	I-----	-----	D-KDFSPYR----	AEA	
NemveTom70	YIKAYLESFS-----	-----	QDEIFSDDLQGGQD-----	-----	DVPND---	SPF---	LAALEEIK-EKRFDKVIDLCDD	E	I-----	-----	N-RGPSPCY----	ARA
DanreTom70	FIKSYFSSFT-----	-----	DDIISQPLQKGEKKDEKDK	---EGE---	ASEVKGS---	SGY---	LKAKQYME-EENYDKII	ISECTKE	I-----	-----	ESGGYS-----	AEA
HomsaTom70	FIKSYFSSFT-----	-----	DDIISQPLQKGEKSDKDK	---EGE---	ALEVKEN---	SGY---	LKAKQYME-EENYDKII	ISECSKE	I-----	-----	DAEGKYM-----	AEA
XenlaTom70	FIKSYFSSFT-----	-----	DDIISQPLQKGEKSDKDK	---EGE---	AAVVKKEK---	SGY---	LKAKQYME-EENYDKII	ISECTKE	V-----	-----	ESEKYM-----	AEA

	TPR5	TPR6	TPR7
BlaspTom70	CLEAATLLS	LLLVKYASCLV	CDGFFHRG
Esi0007_0019	LEYCGSFLYL	KSWVKRGSVLS	SDLFLHRG
Esi0232_0002	WEWQGTFLQL	DVLIKMAWVCM	GSSFAHRRLDSE
PhatrTom70	LEWTGMVKHWR	LVLVKNAGVKM	ADALLHRA
PhyinTom70	QIENGTYHHL	FAKIRMGGLCF	STAYFHRRG
PicpaTom70	YEYLGQFYFL	RSHVTLALTYI	PDIYYHRG
SacceTom70	LEHTGIFKFL	NSYIYMALIMAD	SSVYYHRG
NaucaTom70	LEYNGIFRFL	NSYLALALISAD	LSVYYHRG
NeucrTom70	YNLRGTFHCL	QSYIKRASMNL	PDIYYHRA
AspniTom70	LNQRATFTYL	QSYIKRASLHL	PDIYYHRA
TriadTom70	YALRGTLRLL	NALIKRASYKL	CDIYYHRG
NemveTom70	MALRGTMHTL	NCLIKRGSLHI	SDIYHHRA
DanreTom70	LLLRTATFYL	NALIKRGSMYM	ADVYHHRG
HomsaTom70	LLLRTATFYL	NALIKRGSMYM	ADVYHHRG
XenlaTom70	LLLRTATFYL	NALIKRGSMYM	ADVYHHRG

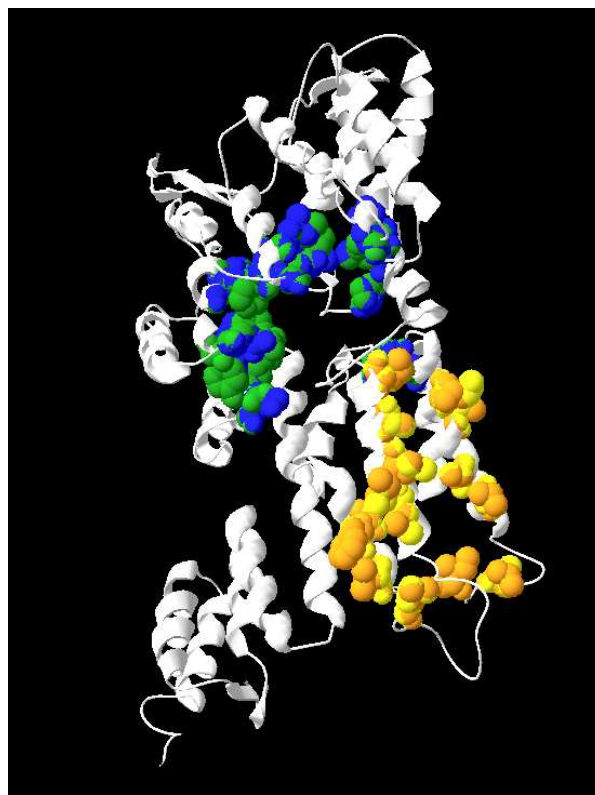
	TPR8	TPR9	TPR10
BlaspTom70	MAYVQLAFCYMN	AQVFN----	AYSYVNEATYYLQTT
Esi0007_0019	TSRAAWGVALFK	PEVLF----	PVPYVNAARAYLGMNDT
Esi0232_0002	FAWEQLCRIHVQAG	DALLT----	PVLYLNKASCLLQMM
PhatrTom70	MARLRLASILAA	SEVQS----	PTPYVNAAMAILQT
PhyinTom70	MAYIQLGVTHARTG	PEIYNLYGETY	PMAYINQGNLLVQKG
PicpaTom70	YAYIQLACISYREG	PEVPN----	ALGILNKATILARR
SacceTom70	FPYIQLACLAYREN	PEVPN----	DGIYVG IAPLVGKATLLTRNP
NaucaTom70	FPYIQLACLAYREN	PEVPT----	KNIHVG IAPLVGKATVLA
NeucrTom70	FSHIQLGVTQYKMG	PDVYN----	KPMCMN VLPLINKALALFQWK
AspniTom70	YSHIQLGVTQYKMG	PDVYN----	KPMSIN VLPLINKALALFQWK
TriadTom70	QAYVHLGYARYK	ADAVS----	PSYYVHKGVLLQVQLK
NemveTom70	PARIQLAYCIYK	PDALS----	PVHKVYKGLLMVQWK
DanreTom70	LAQAQKCFALYR	AEGYA----	ATTYVHKGLLQLQWK
HomsaTom70	LAQAQKCFALYR	AEGYA----	ATTYVHKGLLQLQWK
XenlaTom70	LAQAQKCFALYR	AEGYA----	ATTYVHKGLLQLQWK

	TPR11
BlaspTom70	KA- IKIDPSCIT
Esi0007_0019	DG- HAVCPATG
Esi0232_0002	KG- VSDPTSV
PhatrTom70	EA- IRVDPST
PhyinTom70	KA- VEMCPRSK
PicpaTom70	EA- IQVDPKSE
SacceTom70	KA- SKLDPRSE
NaucaTom70	KA- CEIDPRSE
NeucrTom70	KA- LIIDPECD
AspniTom70	KALIIVDPEDC
TriadTom70	KA- IELDNCDC
NemveTom70	EA- ISIDSKCD
DanreTom70	KA- IEIDNCDC
HomsaTom70	KA- IEIDNCDC
XenlaTom70	KA- IEIDNCDC

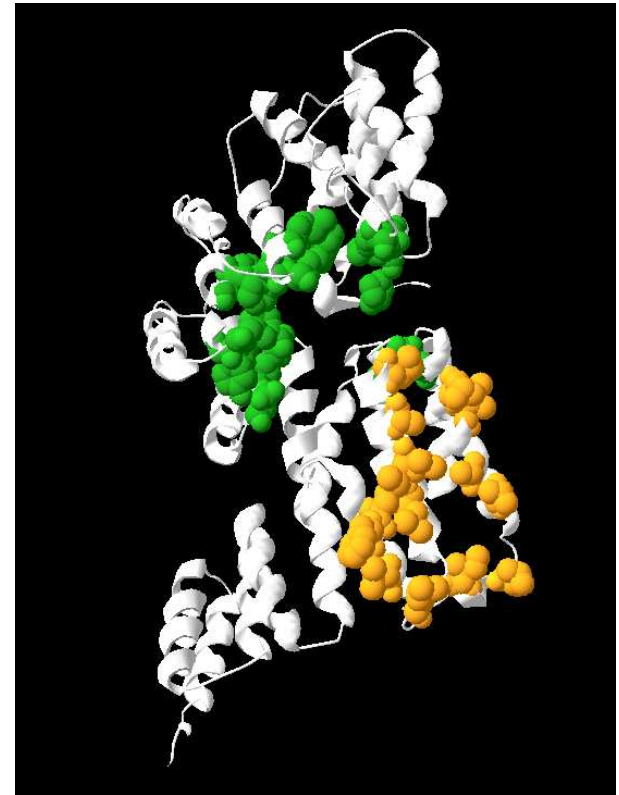
(b)



Ectocarpus Esi0232_0002



Superimposition of the two models



Yeast Tom70