

Ion Channel SF/S6 Alignments

Protein	Sequence					Residues	Uniprot	Organism	PDB
	Selectivity Filter	Linker	S6 Start	S6 Cavity	S6 End				
GluR0	TTVGYGDRSPR		TKLGQVLVAGVVMVLVALLSFSSTITAGLAS	AFST	207-249	P73797	<i>Synechocystis</i> PCC 6803		
GluR-2/AMPA-2	FMQQGCDISPR		SLSGRIVGGVWVFFLLIISSYITANLAA	FLTV	605-647	P42262	Human		
GluR-5/kainate-1	LMQQGSLEMPK		ALSTRIVGGIWWFFLLIISSYITANLAA	FLTV	634-676	P39086	Human		
GluR/NMDA-2A	VFNSVFPVQNPK		GTTSKIMVSVWVAFVAVIFLASYTANLAA	FMIQ	612-655	Q547U9	Human		
KcsA	TTVGYGDLVFPV		TLWGRLVAVVVMVAGITSFGLVTAALAT	WFGV	74-116	POA334	<i>S. lividans</i>	1K4C	
MthK	ATVGYGDYSPS		TPLGMYFTVLIVLIGIGTFAVAVERLLE	FLIN	58-100	O27564	<i>M. thermoautotrophicum</i>	1LNQ	
MlotiK1	STTGYGDTTPQ		SFAGRVLAGAVMMSGIGIFLWAGILAT	GFYQ	174-216	Q98GN8	<i>M. loti</i>	3BEH	
HCN1	LCIGYGAQAPVSM		SDLWITMLSMIVGATCYAMFVGHATALIQSLDS		346-391	O88704	Mouse		
HCN4	LCIGYGRQAPVGM		SDVWLITMLSMIVGATCYAMFVGHATALIQSLDS		477-522	Q9Y3Q4	Human		
CNGA1	TTIGETPPFVRD		SEYFVVVDFLIGVLIFATIVGNIGSMISNMNA		361-405	P29973	Human		
Kv1.1 (H-ERG)	TSVGFNVSPNTN		SEKIFSIIVMLIGSLMYASIFGNVSAIQRLYS		623-668	Q12809	Human		
Slo1 (slowpoke)	STVGYGDDVYAK		TTLGRLFMVFIFLGLGLAMFASVPEIIE	LIGN	351-393	Q12791	Human		
SK1	LSIGYGDVMPH		TYCGKGVCLLTGIMGAGTALVVAVVAR	KLEL	329-371	Q92952	Human		
KvAP	TTVGYGDVYVPA		TPIGKVIQIAVMTGTISALTLLIGTVSN	MFQK	208-250	Q9YDF8	<i>A. permix</i>	1ORQ	
Shaker	TTVGYGDMTPV		GVWGKIVGSLCVVAVGLTIALPVPVIVS	NFNY	441-483	P08510	<i>D. melanogaster</i>		
SqKv1A	TTVGYGDMSPV		GVYKLVGSLCAIAGVLTIALPVPVIVS	NFNY	367-409	Q25376	<i>L. opalescens</i>		
Kv1.2	TTVGYGDMVPT		TIGGKIVGSLCAIAGVLTIALPVPVIVS	NFNY	373-415	P63142	Rat	2R9R	
Kv1.2	TTVGYGDMVPT		TIGGKIVGSLCAIAGVLTIALPVPVIVS	NFNY	373-415	P16389	Human		
Kv1.5	TTVGYGDMRPI		TVGKIVGSLCAIAGVLTIALPVPVIVS	NFNY	479-521	P22460	Human		
Kv3.1	TTLGYGDVMPQ		TWVGLVGLCALCAGVLTIAMVPEVIVN	NFGM	399-441	P48547	Human		
Kv5.1	TTVGYGDVYPK		TTLGLKNAATISFLCGVIAIALPHPIIN	NFVR	369-411	Q9H3M0	Human		
Kv7.1 (KvLQT1)	TTIGYGDVYVQ		TWVQKTIASCFVSFAISFFALPAGILGS	GFAL	311-353	P51787	Human		
Kir1.1 (ROM-K)	VTIGYGFRCVTEQ		CATAIFLLIQSILGVIINFSMCGAILA	KISR	140-184	P48048	Human		
Kir3.1 (GIRK1)	ATIGYGYRIITDK		CPBGIIILFLQISIVLDFLIGCMFI	KMSQ	142-186	P48549	Human		
Kir6.2 (K-ATP)	VTIGFGRMVTBE		CPLAILLIVQINIVGLMNAIMLGCIFM	KTAQ	129-173	Q14654	Human		
KirBac1.1	ATVGYGDMHPQ		TVYAHAIATLEIFVGMGIALSTGLVFA	RFAR	109-151	P83698	<i>B. pseudomallei</i>	1P7B	
KirBac1.4	ATVGYGDMHPQ		TVYAHAIATLEIFVGMGIALSTGLVFA	RFAR	109-151	Q5PMX2	<i>B. thailandensis</i>		
KirBac3.1	ATIGYKLIPI		GPLANTQVTEALCGMLGLVAASLIYA	RFTR	120-162	Q2PW6R1	<i>M. magnetiscus</i>	1XL4	
KirBac1.3	ATVGYGDMHPQ		TVYAHAIATLEIFVGMGIALSTGLVFA		108-141	Q146M9	<i>B. xenovornas</i>	2QKS	
Kir3.1				GCMFI-KMSQ	178-186	P63250	Mouse		
ORK1 (KCNK0)	STVGYGNI SPT		TFAGRIMIMAIYSVIGIPVNGILFAGLGE	YFGR	104-146		<i>D. melanogaster</i>		
	TTIGFPGDYYVTPFGANQP		KEFGGWFVVQIQIVIVWFIFSLGYLVM	MTFI	216-264	Q94526			
Twik-1	STTGYGHVTP		SDGGKAFCIISVIGIPFLLFLTAVVQ	RITV	116-158		Human		
	STIGLGDVYVPEGYNQKF		RELYKIGITCYLLGLLAVLVLETFCE	LHEL	224-273	O00180			
Trek-1	TTIGFGNISPR		TEGGKIFCIIYALLGIPFLFGLLAGVGD	QLGT	156-198	Q95069	Human		
	TTIGFPGDYYVAGGSDIEY		LDYKPVVWFVILVGLYFAAVLSMIGD	WLRV	265-313				
NaK	TTVGDGNFSPQ		TDFGKIFTILYIFIGLGVFGFIHKLAVNVQLP		62-105	Q81HW2	<i>B. cereus</i>	3E86	
Nav	TQDYVENLYQLVIRAE		GPVHALFFILVIFLGSFYLVNLLIATVAMS	YDE	358-406				
	CGEWLESMWTCMEVA		GYACVFFLLTMIIGNLVNLLFLALLLSSFGA		771-818				
	TFKGWINIMSDATDIRDIDQDPKIKEN		SILMYLVFLVIFIGSFFTLNLFIVGVIDNFNQ		1232-1290	Q25377	<i>L. opalescens</i>		
	TSAGWDGLVLAAIMREPPACQPDLPKIFGSKSNNGNCGN		YGMAMVFLVITLVISFLVNMNYIAVILENFSQ		1525-1594				
	TQDFWENLYQLTLRAA		GKTYMIFVFLVIFLGSFYLVNLLIATVAMS	YEE	380-428				
	CGEWLETWDCMEVAG		QAMCLTVFMVMVIGNLVNLLFLALLLSSFS		949-997				
Nav1.1	TFKGMDDIMYAAVDSRNVLQPKYEE		SLYMYFVFIIFIGSFFTLNLFIVGVIDNFNQ		1430-1488	P35498	Human		
	TSAGWDGLLAPILNLSKPPDCDPKKNVPGSSVKGDCGN		PSVGIFFFVSYIIISFLVNMNYIAVILENFSV		1722-1791				
	TQDYVENLYQQLTLRAA		GKTYMIFVFLVIFLGSFYLVNLLIATVAMS	YEE	359-407				
	CGEWLETWDCMEVAG		QAMCLVFMVMVIGNLVNLLFLALLLSSFS		925-973				
Nav1.7	TFKGWIIIMYAAVDSVNDKQPKYEE		SLYMYFVFIIFIGSFFTLNLFIVGVIDNFNQ		1404-1462	Q15858	Human		
	TSAGWDGLLAPILNLSKPPDCPKVHPGSSVEGDCGN		PSVGIFVFSYIIISFLVNMNYIAVILENFSV		1696-1765				
	TQDSWEKLYQQLTRIT		GLYSVFFIVIFLGSFYLVNLLIATVAMS	YEE	357-405				
	CGEWIENMWECEQANAS		SSLCVIVFILTIVIGKLVNLLFLALLLNSFSN		766-816	Q9UI33	Human		
Nav1.9	TFKGMDDIMYAAVDSSTEKEQQPEFES		NSLGYIFVFIIFIGSFFTLNLFIVGVIDNFNQ		1255-1313				
	TSAGWDGLLAPILNLSKPPDCPKVHPGSSVEGDCGN		PSVGIFVFSYIIISFLVNMNYIAVILENFSV		1549-1618				
NaChBac	TLESWASGVMPPIFAE		VPWSWLYFVSVFLIGTIFIFNLFIGVIVNNVEK		189-237	Q9KCR8	<i>B. halodurans</i>		
CatSper1	TLDDWSLVIYDNRAGG		AWYIIPILMIYIVIQYFIFLNLVIAVLDNFMQ		534-579	Q91ZR5	Mouse		
TPC1	TTANFPDVMMPYSR		NPWSCVFFIYVLSIELYFIMNLLAVVDFTFND		278-325		Human		
	VNNWYIIMEGVTSQ		TSHWRLYFMTFYIVTMVMTIIVAFILFAFV		645-692	Q9ULQ1			
TPC2	TTANNPDVMPAYSK		NRAYAIFFIVFTVIGSLFMLNLLTAIISQFRG		270-317	Q8NHX9	Human		
	VNNWQVFLDAYRRYS		GPWSKIYFVWLWLVSSVIWVNLFLALILENFLH		651-699				
Cav1.2	TMEGWTDLVYVNDVAVG		RDWPWYFVFLIIGSFFVNLNLVGLVSGEFSK		361-410				
	TGEDWNSVMYDGMAYGGPSFP		GMLVCIYFIIILFCGNYIILNVFLAIAVDNLAD		704-758	Q13936	Human		
	TFEGWPELLYRSIDSHTEKDGPIYNY		RVEISIFFIYIIIIAIFMMNIFVGFVIVTFQE		1133-1191				
	TGEAWQDMLACMPKCAPSEPSNSTEGETPCG		SSFVAVFYFISFYMLCAFLIINLNVAVIMDNFDY		1462-1529				
	TMEGWTDLVYVNDVAVG		NTWNWLYFIPILIIIGSFFMLNLLVGLVSGEFAK		316-365				
	TGEDWNEVMYDGIKSGGGVQG		GMVFSIYFIVLTLFGNYIILNVFLAIAVDNLAN		666-719				
Cav2.1	TGEGWPKVLKHSVDATFENQGPSPGY		RMEMSIFVYVYFVFFVFNLFVAVIMDNFDY		1458-1516	Q00555	Human		
	TGEAWHNIIMLSCLSGKPCDKNSGILTRCG		NEFAYFYFVSFIFLCSFLMLNLFVAVIMDNFEY		1754-1816				
	TLEGWVDIMYFVMDAH		SFYNYFIFILLIVGSSFFMNLCLVVIATQFSE		352-400				
	TQEDWNLKLVYNGMAST		SSWAALYFIAMLTFGNYVLENLVAVILVEGFQA		921-969				
Cav3.1	SKDGVWDIMYDGLDAVGVDQQPIMNH		NPWMLLYFISFLVIAVFFVNLNMFVGVVVENFHK		1484-1539	Q43497	Human		
	TGDNNWNGIMKDTLRCDQESTCYN		TVSPTIYFVSVFLTAQFVLLNVVIVAVLMLKLEE		1800-1856				
TRPV1 (capsaicin)	IGMGDELFTEYDF		KAVFIILLAYVITLILLNMLIAMLGTEVTK		643-689	Q8NER1	Human		
TRPV3 (warmth)	IGLGLDNIQQNSKY		PILFLFLITVYVILTFVLLNMLIAMLGTEVEN		637-683	Q8NET8	Human		
TRPV5	LIVIDAPANVDVLD		PFMFSIVNFAPALIAITLMLNLFIAMMGDTHWR		538-584	Q9NQA5	Human		
TRPA1	MMGLDINRESFLEPPLRNELAH		PVLSFAQVLSFTIFVPIVLMNLLIGLAVGDIAE		911-966	Q57562	Human		
TRPC1	HSFIGTCFALFWYIF		SFVGVAVIGVYVNVVVVILTKLLVAMLHKSFQL		585-651	P48995	Human		
TRPC5	STLFEITLQSLFWSVFGLLNLYV		TNVKARHEFT		566-630	Q9UL62	Human		
TRPM2	PGYIDGVNFBPHCSPNGDDPYKPKCPESDATTQQRPAFPEWLT		TVLLLCYLLFTNILLNLLIAMFNFTFQQ		983-1054	Q94759	Human		
TRPM8 (menthol)	PSDVDGTTYDFACHTFTGNES-KPLCVELD-EHNLRFPEWTTIPLVCIYMLSTNILLVNLVAMFGYIVGT				916-985	Q7Z2W7	Human		