

Q9H1D0 TrpV6 human MGEALMIAALYDN--LBAAMVIME----AAPELV----PEPMTSELVEGCTALH--IAVYHQNMNLVALLAR-PASV-----SA--RATGTAFR-----RS-PCN-----LI 83
 Q91WD2 TrpV6 mouse MGEALMIAALYDN--LBAAMVIME----AAPELV----PEPMTSELVEGCTALH--IAVYHQNVNLVALLAR-GASV-----SA--RATGSVFB-----YR-PHN-----LI 83
 Q9NQA5 TrpV5 human LGEALMIAALYDN--LBAALVIME----AAPELV----PEPTTCSAFAGCTALH--IAVYHQNVNLVALLAR-PASV-----SA--RATGTAFR-----RS-PFN-----LI 83
 P69744 TrpV5 mouse LGEALMVAALYDN--LDAAMVIME----AAPELV----TESLCLCFPPVCGCTALH--IAVMYQNVNLVALLAR-GASA-----SA--RATGSAPF-----RS-SHN-----LI 83
 XP 416530.2 ECaC chicken VGEALMVAALYDN--VBAALALME----AAPELV----HEPMTSELVEGCTALH--IAVYHQNTITLVKALLKR-GANVCG-----TA--QATGHFFR-----RS-SQN-----LL 84
 NP 001001849.1 ECaC zebrafish LGETALHVAVMDDN--FBAAVALMN----GAPELI----HEPMTSELVHGCTALH--IAVYHQNPNLWEMIKR-GADV-----TTP--RVYGMVFR-----KR-REG-----LF 84
 Q8NER1 TrpV1 human LTKTCLLKAMLLHLDGQNTIPPLLEIARITDLSLKELV--NASTVSYKKGCTALH--IAIERRNMALVTLLVEN-GADV-----QA--AARGDFFK-----KTKGRF-----GF 93
 Q704Y3 TrpV1 mouse LTKTCLLKAMLLHLDGQNTIPPLLEIARITDLSLKELV--NASTVSYKKGCTALH--IAIERRNMALVTLLVEN-GADV-----QA--AARGDFFK-----KTKGRF-----GF 93
 Q8QFN9 TrpV1 chicken LTKTCLLKAMLLHLDGQNTIPPLLEIARITDLSLKELV--NASTVSYKKGCTALH--IAIERRNMALVTLLVEN-GADV-----QA--AARGDFFK-----KTKGRF-----GF 93
 Q9Y5S1 TrpV2 human LTKTCLMKAVLLKQDGVNACILPQLQIDRDSGNPCPLV--NAQCTDEPYRGGHSALE--IAIEKRSLQCVKLLVEN-GANV-----HA--RACGRFFC-----KG-QGT-----CF 92
 Q9WTR1 TrpV2 mouse LTKTCLMKAVLLKQDGVNACILPQLQIDRDSGNPCPLV--NAQCTDEPYRGGHSALE--IAIEKRSLQCVKLLVEN-GANV-----HA--RACGRFFC-----KH-QGT-----CF 92
 XP 415848.2 TrpV2 chicken LTKTCLMKALLLKNGRNLTIPVLLLEIDQKTONPPLV--VACSDCYRGGCTALH--IAIEKRSLDLVKVLLVH-GADV-----HA--RARGEFFR-----KKEGV-----CF 93
 Q8NET8 TrpV3 human LTKTCLMKALLINPMTKBIVRILLAPAEENDILCRFI--NAETTEAAVEGCTALN--IAIERRQGDIAALLIAA-GADV-----NA--HARGAPFN-----PKYQHE-----GF 93
 Q8K424 TrpV3 mouse LTKTCLMKALLINPMTKBIVRILLAPAEENDILCRFI--NAETTEAAVEGCTALN--IAIERRQGDIAALLIAA-GADV-----NA--HARGVFFN-----PKYQHE-----GF 93
 XP 001235155.1 TrpV3 chicken LTKTCLMKALLINMNTNQTIVNMLLSFAEENQILRFI--NAAVTEAAVRCCTALN--IAIERRQFELIQGLIEK-GADV-----NA--HACGIPFN-----PKHKHE-----GF 93
 Q9HBA0 TrpV4 human LTKTCLPKALLLSMGRNLTIPVLLDIAERTGNMREPI--SPFPRDIYRGGCTALH--IAIERRCKHYVELLVAQ-GADV-----HA--QARGRFFC-----PKLEGG-----YF 93
 Q9EPK8 TrpV4 mouse LTKTCLPKALLLSMGRNLTIPVLLDIAERTGNMREPI--SPFPRDIYRGGCTALH--IAIERRCKHYVELLVAQ-GADV-----HA--QARGRFFC-----PKLEGG-----YF 93
 Q9DF83 TrpV4 chicken LTKTCLPKALLLSMGRNLTIPVLLDIAERTGNMREPI--SPFPRDIYRGGCTALH--IAIERRCKHYVELLVEK-GADV-----HA--QARGRFFC-----PKLEGG-----YF 93
 Q9N3Y9 OCR-4 worm VGEILLTCLFLAGI--FNHMKLLAARLIA--IPFKLI--NDPVLGDEEYGEVLE--MGIYSNNAEPVYLLKS-GADV-----HA--RCGGNFFICDQKQ--RTDHPVEHAIISKHTKPG-----HI 109
 P90784 OCR-1 worm MGENLLAICLLQGS--ALB-NLIARLLIN--PFPKLI--NDICVSEEEYGLPFL--LAIYVQDAQFSLLLRL-GADL-----NQ--RCYGAPFCADDQKA--RTDLEHEFVVELTKNTNMG-----SM 108
 O61220 OCR-2 worm MGEIIGCCCLLHAS--DIB-NALVVKILD--YFPKLL--NDIHISEDFYGLPFL--QAIINTDCLVYKFLK-LGADV-----NS--RCYGAPFCADDQKA--RTDLEHEFVVELTKNTNMG-----NM 108
 Q22374 OCR-3 worm LGENLLHVCMLNLT--ADM-NELVQKQNTY--RFPKIV--NDIFLSEEEYGLPFL--QAIYVHEDLEMVYFLCRK-GADV-----HQ--RCYGAPFCADDQKA--RTDLEHEFVVELTKNTNMG-----OM 108
 Q9VUD5 nanchung fruitfly VGEILLHCLLHAS--SLB-ADLAKRLLK--FPPKLI--LLVYMSDEEYGEVLE--IAIYVHEDPAMVYLLDA-NADV-----QE--RCGAPFMSAETKFP--RTDSDPHEEYVALPMTNMDG-----YV 108
 GLEAN3 06793 nanLIKE seaurchin LGEILLHCLFLNAT--ELB-SELAKRIIK--EYPLLV--NDIFPTELLVQGEVCL--PAIYVHEDFTVMVKFLVEN-GANI-----DE--RACGTFFLPDDQKN--TRKDYVHSEVIVVDNKTNMG-----HM 108
 ENSCINP0000004644 nanLIKE seasquirt LGETALHVCFLNLS--TTB-NMLAKEMMK--VFPNLLV--VDIYVLDSEYGEVLE--MTIANDEDIEMVYFLKQ--RKEINAPLN--LEE--RCCGSPFPADQCKL--LARIQDNKNEAPLLOPETNMG-----LL 116
 O17469 OSM-9 worm EGENLIHLLNREQ--QVC-NEIARILLK--RFPGMA--NDIYVLDSEYGEVLE--LAIYVHDDFTVLSLLNS-KADV-----NA--RACGNFFLPEDFK-----LNKNTDNG-----YA 96
 Q9W3W0 inactive fruitfly LGEILLHVLICDS--KVB-ELKARVLLR--VFPNLA--LLVMEGEEVYLGASALE--LSIAYSNNEVALLIEA-GADI-----HQ--RATGSPFPDQKQ-----RANPAKSTIDNG-----LA 98
 GLEAN3 21148 iavLIKEa seaurchin LGEILLHMFPLDIT--RMB-REIASHLLT--VYPKLA--LLVYEGSDPFFGSALE--MAIYVHDKFVYVQVLLVGRY-KARL-----DE--RATGSPFPDHLK-----DHSVSNKSFNG-----TA 99
 GLEAN3 09599 iavLIKEb seaurchin VGENIPLHCLYNT--EVH-QAIAKHLIT--LVPKLA--LLVYEGFEYGEVCL--LAIYVHDDLHSAKLLCNC-GARL-----NQ--RATGSPFPDHLK-----DHSVSNKSFNG-----QA 101
 Q18297 TrpA1 worm MQLLQKHGASITTVQNEDEBETALRPAATGGCTGAVRQLLENDIR--LLLNMKEMGNSALE--LAARSGHDAEYKVLLEN-GANKEAKNSVOKTPIQVAIVESGKLETQORLVA-----TGAVLTKDEBIDCRG-----KGAQT-----SS 114
 Q72020 TrpA1 fruitfly LKNLIRLGACILKMNNSNLEPFAARYGRYNTVROLLESEKGSFIINESDAGMTPLE--ISGQGHVRYVQVLLLN--GALLNRDHT--GRNPIQLAAMSGVETIILLHS-----VBSBLLD-----VD 117
 Glean3 15403 VESLIDLGATVNLKMKAKCPLEFAAR--VESLIDLGATVNLKMKAKCPLEFAAR--VESLIDLGATVNLKMKAKCPLEFAAR--DVK--GRTPPHLAAMGGVKTMDILYS-----TBGBLLD-----GD 62
 XP 782013.2 VESLIDLGATVNLKMKAKCPLEFAARYGRNLSIKRLLDSKIGPNIINBTIDGEGMTALE--IAALFGHQKVVQVLLLR--GALLNKDVK--GRTPPHLAAMGGVKTMDILYS-----TBGBLLD-----GD 117
 consensus TrpA1 seaurchin VESLIDLGATVNLKMKAKCPLEFAARYGRNLSIKRLLDSKIGPNIINBTIDGEGMTALE--IAALFGHQKVVQVLLLR--GALLNKDVK--GRTPPHLAAMGGVKTMDILYS-----TBGBLLD-----GD 117
 NP 001007066 TrpA1a zebrafish VKNMLGLEVSLDQKSREKKALEPFAARFGRINTCHRLLLEMTDTRLLNREGDREGIPL--LAAREGHVQVVELLKR--GALFCSQYK--GWSGLHHAASBGVCTMKTILL--SNIKLLN-----KTD 117
 NP 001007067 TrpA1b zebrafish VKNMLGLEVSLDQKSREKKALEPFAARFGRINTCHRLLLEMTDTRLLNREGDREGIPL--LAAREGHVQVVELLKR--GALFCSQYK--GWSGLHHAASBGVCTMKTILLA--ANVKLLD-----KRN 117
 XP 418294.2 TrpA1 chicken VNNLGLNVSTYSKSRDKKCPLEFAASVGRINTCRLLIREMKTDRLLNREGDKRGMTPLE--LAAQNGHEKVVQVLLKR--GALFICDVK--GWTALHHAASBGVCTMKTILL--TNVKCTD-----KVD 117
 Q8BLA8 TrpA1 mouse VNNLGLNVSTYSKSRDKKCPLEFAASVGRINTCRLLIREMKTDRLLNREGDKRGMTPLE--LAAQNGHEKVVQVLLKR--GALFISDHN--GWTALHHAASBGVCTMKTIVLD--TNLKCTD-----RLD 117
 O75762 TrpA1 human VNNLGLNVSTYSKSRDKKCPLEFAASVGRINTCRLLIREMKTDRLLNREGDKRGMTPLE--LAAQNGHEKVVQVLLKR--GALFISDHN--GWTALHHAASBGVCTMKTIVLD--TNLKCTD-----RLD 117



Q9H1D0 TrpV6 human	YFGSHPLSFAACVMSSEIVRLLIHHG	ADIRA	QDGLGNTVLHILLIQPNK	TFACQMNLLI	SLDR	147
Q9IWD2 TrpV6 mouse	YFGSHPLSFAACVMSSEIVRLLIHHG	ADIRA	QDGLGNTVLHILLIQPNK	TFACQMNLLI	SLDR	147
Q9NQA5 TrpV5 human	YFGSHPLSFAACVMSSEIVRLLIHHG	ADIRA	QDGLGNTVLHILLIQPNK	TFACQMNLLI	SLDR	147
P69744 TrpV5 mouse	YFGSHPLSFAACVMSSEIVRLLIHHG	ADIRA	QDGLGNTVLHILLIQPNK	TFACQMNLLI	SLDR	147
XP 416530.2 BCac chicken	YFGSHVLSFAACVMSSEIVRLLIHHG	ADIRA	QDGLGNTVLHILLIQPNK	TFACQMNLLI	SLDR	148
NP 001001849.1 BCac zebrafish	YFGSHVLSFAACVMSSEIVRLLIHHG	ANIRA	QDGRGNTLHLLVLPQPNK	TFACQIPDFLL	AQDA	148
Q8NER1 TrpV1 human	YFGSLPLSLAACTNGLGIKFLLLQMSWDT	ADISA	RDIVGNTVLHALVEVADHDAADNK	KPVTSMYNEIL	ILGA	165
Q704Y3 TrpV1 mouse	YFGSLPLSLAACTNGLAIKFLLLQMSWDT	ADISA	RDIVGNTVLHALVEVADHDAADNK	KPVTSMYNEIL	ILGA	165
Q8QFN9 TrpV1 chicken	YFGSLPLSLAACTNGLCIKFLLLQMSWDT	ADISA	RDIVGNTVLHALVEVADHDAADNK	KPVTSMYNEIL	ILGA	165
Q9Y5S1 TrpV2 human	YFGSLPLSLAACTRQMDVVVYLLLNPHOP	ASLQA	TDIQGNTVLHALVMIADHDAADNK	KPVTSMYDGLL	QAGA	164
Q9WTR1 TrpV2 mouse	YFGSLPLSLAACTRQMDVVVYLLLNPHOP	ASLEA	TDIQGNTVLHALVMIADHDAADNK	KPVTSMYDGLL	QAGA	164
XP 415848.2 TrpV2 chicken	YFGSLPLSLAACTRQPEVVVYLLLNPHOK	ARLQE	TDIQGNTVLHALVMIADHDAADNK	KPVTSMYDGLL	KAGV	165
Q8NET8 TrpV3 human	YFGSTPLALAACTRQPIVCLLMSH - RQ	TDITS	RDIVGNTVLHALVMIADHDAADNK	KPVTSMYDGLL	LRSG	163
Q8K424 TrpV3 mouse	YFGSTPLALAACTRQPIVCLLMSH - RQ	TDITS	RDIVGNTVLHALVMIADHDAADNK	KPVTSMYDGLL	LRSG	163
XP 001235155.1 TrpV3 chicken	YFGSTPLALAACTRQPDIIELLMEN - TR	TNIAA	QDVRGNTVLHALVMIADHDAADNK	KPVTSMYDGLL	LKSK	163
Q9HBA0 TrpV4 human	YFGSLPLSLAACTRQPHIVMLTBNPHKK	ADMRR	QDVRGNTVLHALVMIADHDAADNK	KPVTSMYDGLL	LKCA	165
Q9EPK8 TrpV4 mouse	YFGSLPLSLAACTRQPHIVMLTBNPHKK	ADMRR	QDVRGNTVLHALVMIADHDAADNK	KPVTSMYDGLL	LKCA	165
Q9DF83 TrpV4 chicken	YFGSLPLSLAACTRQPHIVMLTBNPHKK	ADLRR	QDVRGNTVLHALVMIADHDAADNK	KPVTSMYDGLL	IKCA	165
Q9N3Y9 OCR-4 worm	XWGEYPLSFAACLQSGPCIRMLVAHG	ADVNA	QDINGNTVLHMLVYIYKII	BMPKML	SLGAD	170
P90784 OCR-1 worm	YFGYYPPLSFAICMGDHLFRMLLAKK	ANLSA	QDINGNTVLHMLVYIYKII	BMPKML	EAGGN	169
Q61220 OCR-2 worm	XWGEYPLSFAACLQSGPCIRMLVAHG	ANPNA	QDINGNTVLHMLVYIYKII	BMPKML	ECGAS	169
Q22374 OCR-3 worm	XWGEYPLSFAACLQSGPCIRMLVAHG	ANPNM	QDINGNTVLHMLVYIYKII	BMPKML	ELGAN	169
Q9VUD5 nanchung fruitfly	XWGEYPLSFAACLQSGPCIRMLVAHG	ADPDF	QDINGNTVLHMLVYIYKII	BMPKML	EVGTN	169
GLEAN3 06793 nanLIKE seaurchin	YFGYYPPLSFAACLQSGPCIRMLVAHG	ADVNA	QDINGNTVLHMLVYIYKII	BMPKML	ELGAS	169
ENSCHNF00000004644 nanLIKE seasquirt	XWGEYPLSFAACLQSGPCIRMLVAHG	ADISV	QDINGNTVLHMLVYIYKII	BMPKML	NQAGE	177
O17469 OSM-9 worm	YFGYYPPLSFAACLQSGPCIRMLVAHG	ANPNL	QDINGNTVLHMLVYIYKII	BMPKML	AKPAD	160
Q9W3W0 inactive fruitfly	XWGEYPLSFAACLQSGPCIRMLVAHG	ADPDF	QDINGNTVLHMLVYIYKII	BMPKML	KTPAK	162
GLEAN3 21148 iavLIKEa seaurchin	YFGYYPPLSFAACLQSGPCIRMLVAHG	ADPDF	QDINGNTVLHMLVYIYKII	BMPKML	LLFYAIRHN	172
GLEAN3 09599 iavLIKEb seaurchin	YFGYYPPLSFAACLQSGPCIRMLVAHG	ADPDF	QDINGNTVLHMLVYIYKII	BMPKML	IMPANIAIR	237
Q18297 TrpA1 worm	SDTRKTLHAAAFYGNESIVRYPIAAG	VTID	RRDREGKTAFFDIACENDHK	DVARAPLELDQWKNLMI	PCDVIPLDKHR	191
Q72020 TrpA1 fruitfly	KDGNALHBAARAGHVAARVLLLYRG	CKL	VYVLDMSAIDVAIYKYF	EAALAMVTESE	RANESVM	182
glean3 15403	DCGNAPILLAAQEGGITAVTYLLLRG	AAVD	IVNCADDGIMDIVFDTHNK	DVAVAIVLHK	RWDELL	127
XP 782013.2	DCGNAPILLAAQEGGITAVTYLLLRG	AAVD	IVNCADDGIMDIVFDTHNK	DVAVAIVLHK	RWDELL	182
consensus TrpA1 seaurchin	DCGNAPILLAAQEGGITAVTYLLLRG	AAVD	IVNCADDGIMDIVFDTHNK	DVAVAIVLHK	RWDELL	182
NP 001007066 TrpA1a zebrafish	EDGNALHBAARAGHVAARVLLLYRG	AKI	LLNKQQAFLHALHNKRR	EVVLTIRNK	RWDECLQVF	184
NP 001007067 TrpA1b zebrafish	EDGNALHBAARAGHVAARVLLLYRG	AKI	LLNKQQAFLHALHNKRR	EVVLTIRNK	RWDECLQVF	181
XP 418294.2 TrpA1 chicken	EGDNALHBAARAGHVAARVLLLYRG	AKI	LLNKQQAFLHALHNKRR	EVVLTIRNK	RWDECLQVF	184
Q8BLA8 TrpA1 mouse	EDGNALHBAARAGHVAARVLLLYRG	ADI	VLNKQQAFLHALHNKRR	EVVLTIRNK	RWDECLQVF	184
O75762 TrpA1 human	EDGNALHBAARAGHVAARVLLLYRG	ADI	VLNKQQAFLHALHNKRR	EVVLTIRNK	RWDECLQVF	184



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Q9H1D0 Trpv6 human      -----HGDR-LQPLDLVFNHQGLTPPKLAGVGGNI-----VNFQHLMCK-----RKHIQWTGPDLSILVLDLLEIDIS 209
Q91WD2 Trpv6 mouse      -----GDR-LKSLRLVFNHQGLTPPKLAGVGGNI-----VNFQHLMCK-----RKHIQWTGPDLSILVLDLLEIDIS 208
Q9NQA5 Trpv5 human      -----HGDR-LQPLDLVFNHQGLTPPKLAGVGGNI-----VNFQHLMCK-----RKHIQWTGPDLSILVLDLLEIDIS 209
P69744 Trpv5 mouse      -----G-DR-LKSLRLVFNHQGLTPPKLAGVGGNI-----VNFQHLMCK-----RKRIQWSPGPDLSILVLDLLEIDIS 208
XP_416530.2 ECac chicken -----SKEG-PRSLRLVFNHQGLTPPKLAGVGGNI-----VNFQHLMCR-----RKHNLSWSPGPDLSILVLDLLEIDIS 210
NP_001001849.1 ECac zebrafish -----EQDS-ALPLDMVFNKGLTPPKLAARDGNV-----VVFQHLVNR-----RKVQWSLGPVSSYLVDLLEIDIS 210
Q8NER1 Trpv1 human      -----KLHP-TLKLRELTNKKGMTPLAALAAGTKI-----GVLANILCREIQ-----EPSCRHLRKPTEWANGPVHSLVDLLEIDIS 238
Q704Y3 Trpv1 mouse      -----KLHP-TLKLRELTNKKGLTPLAALAASSGKI-----GVLANILCREIH-----EPSCRHLRKPTEWANGPVHSLVDLLEIDIS 238
Q8QP9 Trpv1 chicken     -----KINP-ILKLEELTNKKGLTPLAALAAGTKI-----GIFANILPREIK-----EPSCRHLRKPTEWANGPVHSLVDLLEIDIS 238
Q9Y5S1 Trpv2 human      -----RLCP-TVQLEDIKRLQDLTPKLAAREGKI-----EIFRHILCREFS-----G--LSHLRKPTEWANGPVHSLVDLLEIDIS 235
Q9WTR1 Trpv2 mouse      -----RLCP-TVQLEDIKRNQGLTPKLAAREGKI-----EIFRHILCREFS-----GL-YQPLRKPTEWANGPVHSLVDLLEIDIS 236
XP_415848.2 Trpv2 chicken -----KNDP-TVKLEELVNYDGNPLCLAAKTGKV-----EIFRHILCREIK-----IVVYRHLRKPTEWANGPIHVSVDLLEIDIS 238
Q8NET8 Trpv3 human      -----NWELETNRNNDGLTPCLAAKMGKA-----EILKYLREIK-----SKRLRSLRKPFDWANGPVSSLDLLEIDIS 232
Q8K424 Trpv3 mouse      -----NWELETNRNNDGLTPCLAAKMGKA-----EILKYLREIK-----SKPLRSLRKPFDWANGPVSSLDLLEIDIS 232
XP_001235155.1 Trpv3 chicken -----DRNLEKVKKKEGLTPCLAAKTGKL-----EVLKYLREIR-----DKPNRSLRKPFDWANGPVQSLVDLLEIDIS 232
Q9HBA0 Trpv4 human      -----RLFP-DSNLEAVLRNNDGLSPLMMAAKTKI-----GIFQHIIRREVT-----DEDTRBLRKPFDWANGPVYSLVDLLEIDIS 238
Q9EPK8 Trpv4 mouse      -----RLFP-DSNLEAVLRNNDGLSPLMMAAKTKI-----GIFQHIIRREVT-----DEDTRBLRKPFDWANGPVYSLVDLLEIDIS 238
Q9DPS3 Trpv4 chicken     -----KLFP-DTNLEALVRNNDGLSPLMMAAKTKI-----GIFQHIIRREIA-----DEDVRLRKPFDWANGPVYSLVDLLEIDIS 238
Q9N3Y9 OCR-4 worm        -----LHICNRQNLPLTLAAPLAKK-----EMMQRIVEE-----ERVNVWVGRNGQAAPLKHVVDLEIDIS 228
P90784 OCR-1 worm        -----IRLANKQNLALTLAARLAKK-----TMFNKILCL-----ECEVWVWGSQCVAPLTKIDLEIDIS 227
O61220 OCR-2 worm        -----LRTVTKQSLPLTLAARLAKK-----EMFDEILLC-----EGDSVWANGDASSLAPLAKIDLEIDIS 227
Q22374 OCR-3 worm        -----LHVRNHLKPLAALAARLAKK-----HVDLILLEC-----DMDISWANGPVCKAFLPLMVDLEIDIS 227
Q9VUD5 nanchung fruitfly -----IHKNIQNLPLTLAARLGRV-----EMFPFVMSI-----ERBIYQLGSLTCAAPLMLVDLEIDIS 227
GLEAN3_06793 nanLIKE seaurchin -----CSIINYOQYPLCLAAELADI-----EPFESLHIL-----ERQVSWKGDVTCALVPLNLDLIGV-D 226
BNSCINF0000004644_nanLIKE_seasquirt -----VDLSQRNRQGFPLTLAKLSNK-----EMLDHIMEL-----KDISWQPGDVTCAVPLSDVLDLEIDIS 238
O17469 oSM-9 worm        -----PHVWNHAGFPLTLAKLGRK-----QLFSEMLEI-----MKVEPWRPDMTCGAFLPLNLDLIGV-D 217
Q9W3W0 inactive fruitfly -----NGVNHQTGLPLTLACKLGRK-----EVESEMLEL-----SAREPWRNSNITCGVPLNLDLIGV-D 219
GLEAN3_21148 iavLIKEa seaurchin -----YTIANKAGLALQLSPQLGRN-----ELESALLEL-----SSETQWTKGIAYVAPLGLDLSIGV-N 229
GLEAN3_09599 iavLIKEb seaurchin -----RLEHGTVIYQIVNSYSEMILIHVVHRCINPANIARINNGLALALEFRLGRK-----ALEFALLEL-----GSGKQWTKGLSYVAPLGLDLSIGV-N 325
Q18297 TrpA1 worm        -----NPVNMKRRTPPRTLLKFPPLAS-----FVMDNICIKSKE-----ETDQV-SVANFPLDLYMRCVDD-G-T 255
Q72020 TrpA1 fruitfly     -----ALRSDBKPCVTLALASMPKVE-----AVCDKCIKANC-----KDKSPFIKISFAPLQCPFMFAKIDEK- - - 246
Glean3_15403              -----FCTINETN-FIDRLIQRMFDVFT-----FVLDRCQIVSDDL-----EPGEPYNNRRDFKYLQIPVCCRKWLKLD- - - 191
XP_782013.2              -----FCTIDETN-FIDRLIQRMFDVFT-----FVLDRCQIVSDDL-----EPGEPYNN- - - 224
consensus TrpA1 seaurchin -----FCTIDETN-FIDRLIQRMFDVFT-----FVLDRCQIVSDDL-----EPGEPYNNRRDFKYLQIPVCCRKWLKLD- - - 246
NP_001007066 TrpA1a zebrafish -----KPNSTKR-CVMDMIEPLPESFK-----HLLDCITRESSE-----DVNCFNYIEINFRWLQPLQNLKKGMEK-D 249
NP_001007067 TrpA1b zebrafish -----LHNSPNNRCPIEMVYVLPESFQ-----HLLDCITRESDB-----DANQDYHIMNFCWLQAPILQKYYAKLTK- - - 247
XP_418294.2 TrpA1 chicken -----LHNSPNNRCPIEMVYVLPESFQ-----LVLDCITRESSE-----KTSRDFPIEINFRYLQPLALNRLKKEAE-D 250
Q8ELA8 TrpA1 mouse       -----LHNSPNNRCPIEMVYVLPESFQ-----LVLDCITRESSE-----DKSCQDYHIEINFRYLQPLALNRLKKEAE-D 250
O75762 TrpA1 human       -----LHNSPNNRCPIEMVYVLPESFQ-----LVLDCITRESSE-----DKSCRDYHIEINFRYLQPLALNRLKKEAE-D 249
.....310.....320.....330.....340.....350.....360.....370.....380.....390.....400.....410.....420.....430.....440.....450

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Q9H1D0 TrpV6_human **GD**--**EC****LLS****LIITK**-----**KREA**-**R****IL****LD****Q****T****P****V****K****EL****V****S****L****K****W****K****R****G****R****F****I**---**FC****ML****G****A****I****Y****L****L****L****I****C****F****M****C****C****V****R****R****L****K**---**F****R****T****N****N****R****T****S****F**-**R****D****N****L****L****Q****K****L****L****O****R****A****M**----- 301

Q91WD2 TrpV6_mouse **GD**--**DC****LLS****LIIVTK**-----**KREA**-**R****IL****LD****Q****T****P****V****K****EL****V****S****L****K****W****K****R****G****R****F****I**---**FC****VL****G****A****I****Y****V****L****L****I****C****F****M****C****C****V****R****R****L****K**---**F****R****T****N****N****R****T****S****F**-**R****D****N****L****L****Q****K****L****L****O****R****A****V**----- 300

Q9NGA5 TrpV5_human **GE**--**EL****F****L****S****LLV****V****SD**-----**KREA**-**R****IL****LD****Q****T****P****V****K****EL****V****S****L****K****W****K****R****G****R****F****I**---**FC****LL****A****A****L****Y****L****L****L****M****I****C****F****T****C****C****V****R****R****L****K**---**F****R****G****G****N****R****T****S****F**-**R****D****N****L****L****Q****K****L****L****O****R****A****E**----- 301

P69744 TrpV5_mouse **GE**--**EL****F****L****S****LLV****V****SK**-----**KREA**-**R****IL****LD****Q****T****P****V****K****EL****V****S****L****K****W****K****R****G****R****F****I**---**FC****LL****G****A****L****Y****I****F****M****V****C****F****T****C****C****V****R****R****L****K**---**F****R****D****A****N****R****T****H****V**-**R****D****N****L****L****M****B****Q****K****L****L****O****R****A****V**----- 300

XP 416530.2 Ecac_chicken **AE**--**DC****F****L****S****LIIV****SK**-----**KREA**-**R****IL****LD****IT****P****V****K****EL****V****S****L****K****W****M****I****G****R****F****I**---**FC****F****L****A****L****Y****V****L****V****M****V****C****F****M****C****C****V****R****R****L****K**---**F****R****S****K****T****S****F**-**R****D****N****L****L****V****Q****R****M****L****O****R****A****V**----- 302

NP 001001849.1 Ecac_zebrafish **VD**--**SH****S****LLS****LIAT****SK**-----**KREA**-**R****IL****LD****IT****P****V****K****EL****V****S****L****K****W****N****L****G****R****F****I**---**FC****FL****M****V****L****V****L****L****S****I****F****T****V****C****C****I****N****R****L****K**---**G****L****E****N****T****S****F**-**R****D****N****L****L****S****K****I****K****K****T****F****K****S****L****Q**----- 303

Q6N8R1 TrpV1_human **VE**--**KNS****V****L****S****LI****AY****SS**-----**ETPN****R****H****D****M****L****V****E****P****L****N****L****L****Q****D****W****D****R****V****K****K****I**---**F****F****N****F****V****L****V****M****I****F****I****F****M****A****A****N****R****P****V****D**---**G****L****P****F****K****M****E****K**----- 315

Q704Y3 TrpV1_mouse **VE**--**KNS****V****L****S****LI****AY****SS**-----**ETPN****R****H****D****M****L****V****E****P****L****N****L****L****Q****D****W****D****R****V****K****K****I**---**F****F****N****F****V****L****V****M****I****F****I****F****M****A****A****N****R****P****V****D**---**G****L****P****F****K****M****L****N**----- 315

Q8QFN9 TrpV1_chicken **VE**--**KNS****V****L****S****LI****AY****SS**-----**ETPN****R****H****D****M****L****V****E****P****L****N****L****L****Q****D****W****D****R****V****K****K****I**---**F****F****N****F****V****L****V****M****I****F****I****F****M****A****A****N****R****P****V****D**---**D****K****P****F****F****A****F****G****H**----- 316

Q9Y5S1 TrpV2_human **VE**--**KNS****V****L****S****LI****AY****F****H****C**-----**KSP****R****H****M****V****L****E****P****L****N****L****L****Q****A****W****D****L****I****P****R**---**F****F****L****N****F****L****C****N****L****I****N****F****I****F****I****V****A****N****H****O****P****L****K****K**-**O****A****A****F****L****K****A**----- 311

Q9WTR1 TrpV2_mouse **VE**--**KNS****V****L****S****LI****AY****F****H****C**-----**KSP****R****H****M****V****L****E****P****L****N****L****L****Q****A****W****D****L****I****P****R**---**F****F****N****F****V****L****V****M****I****F****I****F****I****V****A****N****H****O****P****L****S****Q****A****I****P****S****G****K****A**----- 312

XP 415848.2 TrpV2_chicken **VE**--**KNS****V****L****S****LI****AY****SS**-----**ETPN****R****H****M****V****L****E****P****L****N****L****L****Q****D****W****D****R****V****K****K****I**---**F****F****N****F****V****L****V****M****I****F****I****F****M****A****A****N****R****P****V****D**---**G****L****P****F****K****M****L****N**----- 314

Q8N8T8 TrpV3_human **T**--**D****N****S****V****L****S****LI****V****Y****N****T**-----**H****I****D****N****R****H****M****L****I****E****P****L****T****L****L****H****M****K****K****F****A****K****N**---**F****F****L****S****P****C****F****F****P****F****N****I****L****L****V****S****N****R****R****E****E****A****L****L****P****H****E****L****A****L****T**----- 310

Q8K424 TrpV3_mouse **T**--**D****N****S****V****L****S****LI****V****Y****N****T**-----**H****I****D****N****R****H****M****L****I****E****P****L****T****L****L****H****T****K****K****F****A****K****N**---**F****F****L****S****P****C****F****F****P****F****N****I****L****L****V****S****N****R****R****E****D****E****L****P****H****E****L****A****L****T**----- 310

XP 001235155.1 TrpV3_chicken **A**--**D****N****S****V****L****S****LI****V****Y****N****T**-----**H****I****G****N****R****H****M****L****I****E****P****L****S****L****L****M****K****K****R****F****A****R****N**---**L****M****S****G****C****C****F****P****L****N****V****L****L****V****S****N****R****H****E****N****E****A****F****F****L****A****L****T**----- 310

Q9HBA0 TrpV4_human **GE**--**EA****V****L****S****LI****V****Y****N****S**-----**K****I****N****N****R****H****M****L****A****V****E****P****I****N****E****L****L****R****K****W****K****F****G****A****V****S**---**F****I****N****V****S****Y****L****C****A****M****V****I****F****L****I****A****N****O****P****L****E**---**G****T****P****P****F****P****Y****R**----- 314

Q9EPK8 TrpV4_mouse **GE**--**EV****V****L****S****LI****V****Y****N****S**-----**K****I****N****N****R****H****M****L****A****V****E****P****I****N****E****L****L****R****K****W****K****F****G****A****V****S**---**F****I****N****V****S****Y****L****C****A****M****V****I****F****L****I****A****N****O****P****L****E**---**G****T****P****P****F****P****Y****R**----- 314

Q9DF53 TrpV4_chicken **GE**--**EV****V****L****S****LI****V****Y****N****S**-----**K****I****N****N****R****H****M****L****A****V****E****P****I****N****E****L****L****R****K****W****K****F****G****A****V****S**---**F****I****S****V****S****Y****L****C****A****M****I****F****L****I****A****N****R****P****M****E**---**G****P****P****F****P****Y****T**----- 314

Q9N3Y9 OCR-4_worm **GS****I****L****Q****K****S****AL****S****L****I****AV****Y****G****E**-----**K****V****E****R****-L****S****L****L****P****H**-**L****L****E****Q****L****V****H****R****K****W****I****A****N****G****R****L****K**---**L****F****A****Q****L****S****M****F****C****I****F****I****C****V****S****C****F****L****R****P****S****F****E****R****O****O****I****A****N****D****L****I****C****F****Y****D****F****K****R****R****F****N****E****S**----- 321

P90784 OCR-1_worm **GE****M****D****T****S****AL****S****L****V****Y****G****E**-----**S****I****O****H**-**L****E****L****M****D****G**-**L****I****E****Q****L****I****D****E****K****W****A****N****G****R****A****L****K**---**W****E****R****S****L****L****G****F****I****F****F****C****C****F****V****C****A****M****L****R****P****S****S****A****T****E****H****L****T****R****G****R****I****N****D****E****G****E****S****T****N****S****I****N****L****O****M****H**----- 324

Q61220 OCR-2_worm **GE****L****N****E****A****S****AL****S****L****V****Y****G****O**-----**T****V****E****R**-**L****E****L****L****D****G**-**L****L****I****T****L****E****A****K****W****R****A****F****A****K****N**---**M****I****V****S****F****T****A****F****L****Y****I****C****F****V****A****F****T****L****R****P****S****T****E****M****L****T****R****G****M****I****N****R****Y****S****E****F****F****G****R****Y****G****K****N****S****T****L****Q****O****V****I****P****V****I****N****A**----- 332

Q22374 OCR-3_worm **GE****L****N****E****A****S****AL****S****L****V****Y****G****D**-----**K****V****D****-L****E****P****F****D****G**-**L****I****E****V****L****E****S****K****W****T****F****G****K****K****O**---**L****M****S****L****A****G****Y****I****F****L****A****V****F****L****A****F****M****R****D****A****H****L****I****D****S****E****D****E****B****E****N****E****K****F****G****M****I****E****L****F****S****N****F****I****N****L****S****E****G****L****S****L****R****E****H****L****A**----- 332

Q9VUD5 nanchung_fruitfly **GN****I****N****K****D****S****AL****S****L****V****Y****G****D**-----**K****L****E****R**-**L****E****L****L****D****G**-**V****V****I****D****L****L****K****T****K****W****D****T****C****K****S****R**---**F****I****K****Q****F****V****M****F****A****L****V****L****I****L****F****L****F****P****I****L****R****P****G****D****A****K****D****E****B****E****G****A****N****S****T****A****K****L****L****V****R****Q****N****G****S****D****S****H****L****H****S****K****R****A****T****M**----- 332

GLEAN3 06793 nanLIKE_seaurchin **GS****V****N****E****K****S****AL****S****L****I****V****N****Q****S**-----**D****I****D****-L****E****G****L****M****K****G**-**L****M****T****K****L****L****H****B****E****K****W****T****F****G****R****P****Q**---**F****I****L****R****M****G****L****F****I****P****L****L****L****L****T****A****F****V****L****R****P****G****K****D****R****N****A****R****I****N****V****T****D****S****F****G****N****T****V****V****H****K****N****R****C****Y****L****L****Y****S****D**----- 325

BNSCINP0000004644 nanLIKE_seasquirt **GS****I****N****K****S****AL****S****I****L****S****A****E**-----**S****N****E****R**-**L****D****M****L****D****G**-**L****L****F****Q****L****L****A****K****W****K****A****F****A****R****K**---**F****I****E****R****G****A****F****F****F****V****L****A****F****I****L****A****V****L****Q****A****P****V****S****L****P****L****K****A****L****S****S****S****V****V****K****L****N****H****R****T****R****F****V****T****N****T****S****T****G****L****V**----- 343

O17469 oSM-9_worm **GS****V****N****D****S****AL****S****M****V****I****N****G****S**-----**T****P****E****R**-**L****E****M****I****G****S****E****V****I****C****L****L****A****K****W****K****A****F****A****R****K**---**L****I****E****R****L****V****L****L****V****Q****L****I****L****L****V****V****I****R****P****A****F****V****S****L****P****L****K****H****E****L****D**----- 295

Q9W3W0 inactive_fruitfly **GR****N****V****N****S****AL****S****I****L****I****N****G****T**-----**T****P****E****R**-**L****D****M****L****D****G****G****L****I****C****L****L****E****K****W****T****F****A****Q****N****Q**---**F****I****K****R****L****L****L****S****T****H****L****L****C****L****S****V****V****L****R****P****A****H****G****S****A****E****D****E****S****E****G****S****A****S****A****A****L****L****D****I****C****S****D****E****G****L****S****G****G****G****I****Y**----- 322

GLEAN3 21148 iavLIKEa_seaurchin **GC****V****N****S****S****AL****S****V****I****V****C****D**-----**T****I****N****N**-**L****K****M****L****E****Q****V****I****D****E****L****L****H****V****K****W****N****L****S****C****K****Q**---**F****A****P****K****L****P****W****A****C****I****B****L****T****M****L****P****L****A****V****Q****L****R****P****A****H****G****L****S****G****S**----- 304

GLEAN3 09599 iavLIKEb_seaurchin **GR****L****E****N****S****AL****S****M****V****I****V****F****G**-----**Q****A****O****H**-**L****K****M****L****E****Q****V****V****V****H****L****Q****E****K****W****F****A****R****Q****R**---**L****M****K****F****T****I****T****V****V****Q****L****V****A****M****I****F****S****F****A****R****K****R****I****T****P****D****E****R****A****Q****E****K****K****F****S****G****O****H****F****K****R****I****L**----- 418

O18297 TrpA1_worm **GE****L****I****G****C****K****S****A****N****D****E****L****F****K****L****E****K****D****A****Q****Y****A****S****N****V****D****R****V****K****V****P****L****K****L****M****A****D****A****E**-----**K****L****R****L****L****N****H****P****L****S****K****A****L****L****K****Y****K****N****R****I****G****R****P****M**---**V****V****F****A****L****F****M****L****V****P****I****V****S****L****C****V****V****R****T****K****A****P****T****N****V****N****E****E****S****Y****D****S****E****Y**----- 363

Q72020 TrpA1_fruitfly **GE****S****I****T****T****A****F****I****P****L****P****A****L****N**-----**M****N****V****T****R****G****V****E****L</**

Q9H1D0 TrpV6 human	VMYFA	---	RGFQMLGPPFIMICKMIFG	---	FLMRFCWLMVVILGFASAFYIIPQTED	---	PBELGHPYDIPMALPSTFPELF-LII	---	IDG	466
Q91WD2 TrpV6 mouse	VMYFA	---	RGFQMLGPPFIMICKMIFG	---	FLMRFCWLMVVILGFASAFYIIPQTED	---	PDRLGHPYDIPMALPSTFPELF-LII	---	IDG	465
Q9NQA5 TrpV5 human	VMYFT	---	RGFQMLGPPFIMICKMIFG	---	FLMRFCWLMVVILGFASAFYIIPQTED	---	PTSLGQPYDIPMALPSTFPELF-LIV	---	IDA	466
P69744 TrpV5 mouse	VMYFA	---	RGFQMLGPPFIMICKMIFG	---	FLMRFCWLMVVILGFASAFYIIPQTED	---	PDNLGEPYDIPMALPSTFPELF-LII	---	IDG	465
XP_416530.2 ECac chicken	VMYFA	---	RGFQMLGPPFIMICKMIFG	---	FLMRFCWLMVVILGFASAFYIIPQTEK	---	PNLIGQPYDIPMALPSTFPELF-LII	---	IDG	467
MF_001001849.1 ECac zebrafish	LVYFA	---	RGFEMLGGPVIVICKRIFG	---	ELRKPWMLIIPFLIGSSAALMIFPMICR	---	FLALPOYRSPFIIIFPQFVSG-VGQ	---	IDL	468
Q8NKR1 TrpV1 human	MLYNT	---	RGFQMGIIAVMIKRMILR	---	LLCRFMFVIVFLPFGSTAVVYLLERDKNDSE	---	ESGSHRWRGACRPPD-SSNNLISGCLLKFPIIG	---	MGD	494
Q704Y3 TrpV1 mouse	MLYNT	---	RGFQMGIIAVMIKRMILR	---	LLCRFMFVIVFLPFGSTAVVYLLERDKNDSE	---	ESPKKCRGACRPPD-SSNNLISGCLLKFPIIG	---	MGD	494
Q8QFN9 TrpV1 chicken	MLYNT	---	RGFQMGIIAVMIKRMILR	---	LLCRFMFVIVFLPFGSTAVVYLLERDNDSCQTN	---	SEHAR--GSHTKRRTSNLRYGCLLKFPIIG	---	MGD	494
Q9Y5S1 TrpV2 human	MLYNT	---	RGFHRCIISVMICKVILR	---	LLRPELLVYLVLVPLFGFAVALVSLRREARSRKAP	---	GNHATESVQFMEGQEDBENACRGLLEACLKFKPIIG	---	MGE	495
Q9WTR1 TrpV2 mouse	MLYNT	---	RGFHRCIISVMICKVILR	---	LLRPELLVYLVLVPLFGFAVALVSLRREARSRKAP	---	DGNITTYTEKFLIGQREEPVFVGGILDASLLEKFKPIIG	---	MGE	494
XP_415848.2 TrpV2 chicken	MLYNT	---	RGFHRCIISVMICKVILR	---	LLRPELLVYIIFLFGFAAALVSLRREARSRKAP	---	LQNKSVACMENAESHAMVGGILSVCLLEKFKPIIG	---	MGD	489
Q8NET8 TrpV3 human	MLYNT	---	RGFPSMGMSVMICKVILH	---	LVLEKLPFYIIVFLPFGFVALASLIEK	---	FKDKDKCSSYGFSDAVLLEKFKPIIG	---	LGD	475
Q8K424 TrpV3 mouse	MLYNT	---	RGFPSMGMSVMICKVILH	---	LVLEKLPFYIIVFLPFGFVALASLIEK	---	CSKDKDKCSSYGFSDAVLLEKFKPIIG	---	LGD	475
XP_001235155.1 TrpV3 chicken	MLYNT	---	RGFPSMGMSVMICKVILH	---	LVLEKLPFYIIVFLPFGFVALASLIEK	---	CQNGGRCLSGSLGFLVLMLEKFKPIIG	---	LGD	474
Q9HBA0 TrpV4 human	ALYFT	---	RGLKRLGTYISIMICKILFK	---	ELPRFLVYLLFPMIGASALVSLNFCANMKVCN	---	DQTNCTVPTYPACRDS-EMFSTFLLLEKFKPIIG	---	MGD	493
Q9EPK8 TrpV4 mouse	ALYFT	---	RGLKRLGTYISIMICKILFK	---	ELPRFLVYLLFPMIGASALVSLNFCANMKVCN	---	DQSNCTVPTYPACRDS-EMFSAFLLLEKFKPIIG	---	MGD	493
Q9DFP3 TrpV4 chicken	ALYFT	---	RGLKRLGTYISIMICKILFK	---	ELPRFLVYLLFPMIGASALVSLNFCPSSESC	---	SEDSNCTVPTYPACRDS-EMFSTFLLLEKFKPIIG	---	MGD	493
Q9N3Y9 OCR-4 worm	FLYFC	---	RGFKSVGGPVFLMVKIIR	---	LMRPFLLVYLVVVGFSQAFVIVPLGYK	---	RDSGGRSEFNISINVAEIVRMFIMLTFE	---	TVF	492
P90784 OCR-1 worm	FLYFC	---	RGFKSVGGPVFLMVKIIR	---	LMRPFLLVYLVVVGFSQAFVIVPLGYK	---	RDTAIKKIKDPMSEFNINMIVDALLRPFIMLTFE	---	TVF	523
Q61220 OCR-2 worm	FLYFC	---	RGLKRLGTYISIMICKILFK	---	ELPRFLVYLLFPMIGASALVSLNFCANMKVCN	---	SEANVIRKELIDCSSEANEGDINKFNITR	---	TVL	570
Q22374 OCR-3 worm	FLYFC	---	RGLKRLGTYISIMICKILFK	---	ELPRFLVYLLFPMIGASALVSLNFCANMKVCN	---	SEANVIRKELIDCSSEANEGDINKFNITR	---	GAL	542
Q9VUD5 nanchung fruitfly	FLYFC	---	RGFKSVGGPVFLMVKIIR	---	LMRPFLLVYLVVVGFSQAFVIVPLGYK	---	RABIAVQKAHNYTEDDEYIEKFNENMEDGNEAVRMFIMLTFE	---	GDY	545
GLEAN3_06793 nanLIKE seaurchin	FLYFC	---	RGLKRLGTYISIMICKILFK	---	ELPRFLVYLLFPMIGASALVSLNFCANMKVCN	---	NPSSEEDQDESNMPPNNEISIVAMPIMLTFE	---	GDY	487
ENSCINP00000004644 nanLIKE seaurquirt	FLYFC	---	RGLKRLGTYISIMICKILFK	---	ELPRFLVYLLFPMIGASALVSLNFCANMKVCN	---	VGAETNFDISAVNMVPMMLTFE	---	QDL	525
O17469 OSM-9 worm	LMFFA	---	RSKRLGPPVCMYISMIAG	---	EMRPAITSAIPLVGFSAQVYFVQKMD	---	HPLFSPHPPQSIKMGPIIILGEP	---	D-	476
Q9W3W0 inactive fruitfly	LMFFA	---	RSKRLGPPVCMYISMIAG	---	EMRPAITSAIPLVGFSAQVYFVQKMD	---	AKQKLEDINPHACRISGTYITTYNPPSTFPIILFRAIMGGV	---	D-	487
GLEAN3_21148 iavLIKEa seaurchin	LLYFY	---	RANSLGGLVVMFGKMLG	---	LLRPELLVYLLFPMIGASALVSLNFCANMKVCN	---	PCVQSTMVNYISSTFPIILFRAIMGGV	---	N-	476
GLEAN3_09599 iavLIKEb seaurchin	LLYFY	---	RANSLGGLVVMFGKMLG	---	LLRPELLVYLLFPMIGASALVSLNFCANMKVCN	---	ANTKSPVYISGEPISGPIIMINGEP	---	N-	468
Q18297 TrpA1 worm	LLYFY	---	RANSLGGLVVMFGKMLG	---	LLRPELLVYLLFPMIGASALVSLNFCANMKVCN	---	NFKFEDWEGEIAITPCMEIFGR	---	SVV	583
Q72020 TrpA1 fruitfly	LLYFY	---	RANSLGGLVVMFGKMLG	---	LLRPELLVYLLFPMIGASALVSLNFCANMKVCN	---	NFKFEDWEGEIAITPCMEIFGR	---	SVV	583
glean3_15403	LLYFY	---	RANSLGGLVVMFGKMLG	---	LLRPELLVYLLFPMIGASALVSLNFCANMKVCN	---	NFKFEDWEGEIAITPCMEIFGR	---	SVV	583
XP_782013.2	LLYFY	---	RANSLGGLVVMFGKMLG	---	LLRPELLVYLLFPMIGASALVSLNFCANMKVCN	---	NFKFEDWEGEIAITPCMEIFGR	---	SVV	583
consensus TrpA1 seaurchin	LLYFY	---	RANSLGGLVVMFGKMLG	---	LLRPELLVYLLFPMIGASALVSLNFCANMKVCN	---	NFKFEDWEGEIAITPCMEIFGR	---	SVV	583
MF_001007066 TrpA1a zebrafish	LLYFY	---	RANSLGGLVVMFGKMLG	---	LLRPELLVYLLFPMIGASALVSLNFCANMKVCN	---	NFKFEDWEGEIAITPCMEIFGR	---	SVV	583
MF_001007067 TrpA1b zebrafish	LLYFY	---	RANSLGGLVVMFGKMLG	---	LLRPELLVYLLFPMIGASALVSLNFCANMKVCN	---	NFKFEDWEGEIAITPCMEIFGR	---	SVV	583
XP_418294.2 TrpA1 chicken	FLYFC	---	RGFKSVGGPVFLMVKIIR	---	LMRPFLLVYLVVVGFSQAFVIVPLGYK	---	SEANVIRKELIDCSSEANEGDINKFNITR	---	TVL	570
Q8BLA8 TrpA1 mouse	FLYFC	---	RGFKSVGGPVFLMVKIIR	---	LMRPFLLVYLVVVGFSQAFVIVPLGYK	---	SEANVIRKELIDCSSEANEGDINKFNITR	---	TVL	570
O75762 TrpA1 human	FLYFC	---	RGFKSVGGPVFLMVKIIR	---	LMRPFLLVYLVVVGFSQAFVIVPLGYK	---	SEANVIRKELIDCSSEANEGDINKFNITR	---	TVL	570



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Q9H1D0 TrpV6 human           P----ANY-N-VD---LPFMYSVIYAAPAIATLLMLNLLIAMMGDTHWRVAHERDELWRAQIVATTVMLEERKL 531
Q91WD2 TrpV6 mouse           P----ANY-D-VD---LPFMYSVIYAAPAIATLLMLNLLIAMMGDTHWRVAHERDELWRAQIVATTVMLEERKL 530
Q9NQA5 TrpV5 human           P----ANY-D-VD---LPFMYSVIYAFAPAIATLLMLNLFIAMMGDTHWRVAQERDELWRAQIVATTVMLEERKL 531
P69744 TrpV5 mouse           P----ANY-R-VD---LPFMYSVIYAFAPAIATLLMLNLFIAMMGDTHWRVAQERDELWRAQIVATTVMLEERKM 530
XP_416530.2 EcAc chicken     P----ANY-D-VD---LPFMYSVVYFAPAIATLLMLNLLIAMMGDTHWRVAHERDELWRAQIVATTVMLEERKL 532
NP_001001849.1 EcAc zebrafish P----VDE-T-LF---LPFVYVWIVVCFELISNVLLPMLLVAMMSDTHQNRVTVQERDELWRTQVATTVMLEERKL 533
Q8NER1 TrpV1 human           L----EFT-ENVD---FKAVPIIILLAYVILTYILLNMLIALMGETVVKIAQESKNIWKLQRAITILLDEKSP 560
Q704Y3 TrpV1 mouse           L----EFT-ENVD---FKAVPIIILLAYVILTYILLNMLIALMGETVVKIAQESKNIWKLQRAITILLDEKSP 560
Q8QFN9 TrpV1 chicken         L----EFT-ENVR---FKSVFVILLVLYVILTYILLNMLIALMGETVSKIAQESKSIWKLQRAITILLDIENSY 560
Q9Y5S1 TrpV2 human           L----AFO-BQLB---FRGMVLLLLAYVLLTYILLNMLIALMSETVNSVATDSWSIWKLQKAI SVLEMENGY 561
Q9WTR1 TrpV2 mouse           L----AFO-BQLR---FRGMVLLLLAYVLLTYILLNMLIALMSETVNSVATDSWSIWKLQKAI SVLEMENGY 560
XP_415848.2 TrpV2 chicken     L----DFH-BHAR---FRFVFMILLLLPVILTYILLNMLIALMSETVTDISGYSKSVWKLQRAITILLEIKAW 555
Q8NET8 TrpV3 human           L----NIQ-QNSK---XPILFPLLLITVYVILTFVLLNMLIALMGETVENVSKESERIWKLQRAITILEFEKML 541
Q8K424 TrpV3 mouse           L----NIQ-QNST---XPILFPLLLITVYVILTFVLLNMLIALMGETVENVSKESERIWKLQRAITILEFEKML 541
XP_001235155.1 TrpV3_chicken L----EIQ-QNSK---YPVLPFLLLLITVYVILTFVLLNMLIALMGETVEIISKSESHIWKLQRAITILEFEKPL 540
Q9HBA0 TrpV4 human           L----EML-SSAK---YPVVFILLLVTYIILLTFVLLNMLIALMGETVGCVSKESKHIWKLQWATTILLDIERSF 559
Q9EPK8 TrpV4 mouse           L----EML-SSAK---YPVVFILLLVTYIILLTFVLLNMLIALMGETVGCVSKESKHIWKLQWATTILLDIERSF 559
Q9DFS3 TrpV4 chicken         L----EML-ESAK---YPGVFIILLVTYIILLTFVLLNMLIALMGETVGCVSKESKHIWKLQWATTILLDIERSF 559
Q9N3Y9 OCR-4 worm            F----EQLER-CEH---TWIGKILFVYVMLLVLLLLINMLIAMMTNTYTVSSG-HGLEWLRWAAILLMMGCSF 557
P90784 OCR-1 worm            Y----REMSA-CDNFWMKNIKGLIFVIFEPVSIILQPNLLIAMMTRTYETIPL-TRKKNRRWAQVILMLRMGL 591
O61220 OCR-2 worm            Y----RNLAL-CPANIMVWIGKVVVILFELFVSIQPNMLIAMMTRTYETIFQ-IQLEKRRWAQVILMLLELSL 638
Q22374 OCR-3 worm            Y----KNLNE-CKGS-IAPOSQVVFILFELIVVMLLNLLIAMMTRTYEKIAR-TEKEWRRWAQVILMLELGS 609
Q9VUD5 nanchung fruitfly     Y----GAMVS-IG---HEVSAKILFFLPMVIVSVLLVNMMLIAMMGTNYQKIAE-IRNEWCRQWAKIVLVVERSV 610
GLEAN3 06793 nanLIKE seaurchin Y----EKFDE-IR---YPMMAKFLPFVVMVLTLLLVNMLIAMMGTNYQKIAN-ADYEWCRQWAKVVLVLESL 552
BNSCINF0000004644 nanLIKE seaurchin Y----LDFDR-SR---HPLAAKFLFLVVMVLTLLLVNMLIAMMGTNYQKIAN-IRNEWCRQWAKIVLVVERSV 590
O17469 osm-9 worm            Y----EFSFC-AN---YQALTKLFLVVMVLTLLLVNMLIAMMGTNYQKIAN-IRNEWCRQWAKIVLVVERSV 542
Q9W3W0 inactive fruitfly     Y----FDLQD-T---YPNLSKLVFVFMVFPVILLNMLIAMMGTNYQKIAN-IRNEWCRQWAKIVLVVERSV 553
GLEAN3 21148 iavLIKEa seaurchin W----RELYE-CR---MPNFAIILFPIIFMFIQVLMMLNMVIMMARTFDIIKERSRMEWRQWAKIVLVVERSV 534
GLEAN3 09599 iavLIKEb seaurchin N----TK-DE-AR---HFGIASFLMVLPAILVPLLNMLIAMMAKTYSEIMARALMEWRQWAKIVLVQAEETV 648
Q18297 TrpA1 worm            FHGETTAEKMPGPARTAVACALFPFPCIMYILLMNLVGLAVDDIKGVQEKAEKRIAMQVVLVQLIEASL 609
Q7Z020 TrpA1 fruitfly        YV---NTYIRDQ---LKVPMTRFLILSVFMILMPILLMNLVGLAVGDIESVRNNAQLKRIAMQVVLVTELERKL 598
glean3 15403                  FV---LPMYDDDDYTHQYSFPALIFLLALCVLLPILLMNLVGLAVGDIAAVQRDAQLKRIAMQVQLVTVNVTREL 509
XP_782013.2                  FV---LPMYDDDDYTHQYSFPALIFLLALCVLLPILLMNLVGLAVGDIAAVQRDAQLKRIAMQVQLVTVNVTREL 532
consensus TrpA1 seaurchin     FV---LPMYDDDDYTHQYSFPALIFLLALCVLLPILLMNLVGLAVGDIAAVQRDAQLKRIAMQVQLVTVNVTREL 564
NP_001007066 TrpA1a zebrafish FM---KPVLCGD---LPPFLLLAIFVVFVLLVPLLMLNMLVGLAVGDIABVQTNACLKRIAMQVLELSTNLEERL 559
NP_001007067 TrpA1b zebrafish FL---NSYLSGH---MAFFAITVYVYVVFVLLMPLLMLNMLVGLAVGDIABVQRNAAELKRIAMQVLELSTALEERL 558
XP_418294.2 TrpA1 chicken     FL---DPLLSSE---LPPVPLSTVYLIIFPLIPLLMLNMLVGLAVGDIABVQYAAALKRIAMQVLELSTNLEERL 562
Q8BLA8 TrpA1 mouse           FL---EPLFRME---LAPVPLPGQLIAPFMFVPIVLMNMLVGLAVGDIABVQKHAALKRIAMQVLELSTNLEERL 564
O75762 TrpA1 human           FL---EPLFRME---LAPVPLSAQVLVSPVPIVLMNMLVGLAVGDIABVQKHAALKRIAMQVLELSTNLEERL 562
.....910.....920.....930.....940.....950.....960.....970.....

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