```
h_Arf1     1  MGNIFANLFKGLFGKKEMRILMVGLDAAGKTTILYKLKLGEIVTTIPTIGFNVETVEYKN
zf_Arf1    1  MGNIFANLFK-VFGKKEMRILMVGLDAAGKTTILYKLKLGEIVTTIPTIGFNVETVEYKN


h_Arf1    61  ISFTVWDVGGQDKIRPLWRHYFQNTQGLIFVVDSNDRERVNEAREELMRMLAEDELRDAV
zf_Arf1   60  ISFTVWDVGGQDKIRPLWRHYFQNTQGLIFVVDSNDRERVNEAREELMRMLAEDELREAV


h_Arf1   121  LLVFANKQDLPNAMNAAEITDKLGLHSLRHRNWYIQATCATSGDGLYEGLDWLSNQLRNQ
zf_Arf1  120  LLVFANKQDLPNAMNAAEITDKLGLHSLRHRNWYIQATCATSGDGLYEGLDWLSNQLKNQ


h_Arf1   181  K
zf_Arf1  180  K
```

```
h_Dan      1 ---MLRVLVGAVLPAMLLAAPPP-INKLALFPDKSAWCEAKNITQIVGHSGCEAKSIQNR
zf_Dan     1 MVMCVRAVLVCVLLELSRAAPHAHINRLALFPDKSAWCEAKNITQIVGHTGCTPRSIQNR


h_Dan     57 ACLGQCFSYSVPNTFPQSTESLVHCDSCMPAQSMWEIVTLECPGHEEVPRVDKLVEKILH
zf_Dan    61 ACLGQCFSYSVPNTFPQSTESLVHCDSCMPAQTQWEVVTLDCSGSDEAPRVDKLVERILH


h_Dan    117 CSCQACGKEPSHEGLSVYVQGEDGPGSQPGTHPHPHPHPHPGGQTPEPEDPPGAPHTEEE
zf_Dan   121 CSCQSCSKESSQEGALLQLYPHEGAQDLPSLPDATHTHPQHAHMQADQRD--ADAHLDMH


h_Dan    177 GAED-
zf_Dan   179 APEAG
```

```
h_Hint2     1 -MAAAVVLAAGLRAARRAVAATGVRGGQVRGAAGVTDGNEVAKAQQATP--GGAAPTIFS
zf_Hint2    1 MTACGVLLTRQLLPFGRGLWRVLS----VKSCYSTIN-DEVRLAQEASKKYGKLEPTIFT


h_Hint2    58 RILDKSLPADILYEDQQCLVFRDVAPQAPVHFLVIPKKPIPRISQAEEEDQQLLGHLLLV
zf_Hint2   56 KIIDKTVPAVIIYEDDKCLAFRDVNPQAPVHYLVIPRIPIPRISEAHDEDSLILGHLLVV


h_Hint2   118 AKQTAKAEGLGDGYRLVINDGKLGAQSVYHLHIHVLGGRQLQWPPG
zf_Hint2  116 AKNIAKKEGLAEGYRVVINDGKNGAQSVYHLHIHVLGGRQMKWPPG
```

```
h_Ip3r     1  -MSEMSSFLHIGDIVSLYAEGSVNGFISTLGLVDDRCVVEPAAGDLDNPPKKFRDCLFKV
zf_Ip3r    1  MSDSASSFLHIGDIVSLYAEGTVNGFISTLGLVDDRCVVEPASGDLENPPKKFRDCLFKV


h_Ip3r    60  CPMNRYSAQKQYWKAKQTKQDKEKIADVVLLQKLQHAAQMEQKQNDTENKKVHGDVVKYG
zf_Ip3r   61  YPMNRYSAQKQFWKAKQAKHEKDKIGDMVLLQKLQHAANLEQKQNDAENKKVHGDVVKYG


h_Ip3r   120  SVIQLLHMKSNKYLTVNKRLPALLEKNAMRVTLDATGNEGSWLFIQPFWKLRSNGDNVVV
zf_Ip3r  121  SVIQLLHMKSNKYLTVNKRLPALLEKNAMRVTLDGTGNEGSWLFIQPFWKLRANGDNVVV


h_Ip3r   180  GDKVILNPVNAGQPLHASNYELSDNAGCKEVNSVNCNTSWKINLFMQFRDHLEEVLKGGD
zf_Ip3r  181  GDKVILNPVNAGQPLHASSYELPDHSGCKEINSVNSNTSWKISLFMMFSDHKDEVLKGGD


h_Ip3r   240  VVRLFHAEQEKFLTCDEYKGKLQVFLRTTLRQSATSATSSNALWEVEVVHHDPCRGGAGH
zf_Ip3r  241  VVRLFHAEQEKFLTCDEYKSKLHVFLRTTLRQSATSATSSNALWEVEVVHHDPCRGGAGH


h_Ip3r   300  WNGLYRFKHLATGNYLAAEENPSYKGDASDPKAAGMGAQGRTGRRNAGEKIKYCLVAVPH
zf_Ip3r  301  WNSLYRFKHLATGNYLAAEENPGYKENSNDIEVGYIVDSSRIKR-SLGERIKYKLVAVPH


h_Ip3r   360  GNDIASLFELDPTTLQKTDSFVPRNSYVRLRHLCTNTWIQSTNVPIDIEERPIRLMLGT
zf_Ip3r  360  GNDIASLFELDPTTLQKTDSFVPRNSYVRFRHLCTNTWIQSTNIPIDIDEERPIRLMLGT


h_Ip3r   420  CPTKEDKEAFAIVSVPVSEIRDLDFANDASSMLASAVEKLNEGFISQNDRRFVIQLLEDL
zf_Ip3r  420  CPTKEDKEAFAIVSVPVMEIRDLDFANDASLMLSTVVEKFKYGFLSPNDRRYAIKLLEDV


h_Ip3r   480  VFFVSDVPNNGQNVLDIMVTKPNRERQKLMREQNILKQVFGILKAPFREKGGEGPLVRLE
zf_Ip3r  480  VFFVVDQLNNGQPALEVSMNKPNRERQKLMREQNILKQIFGIIKAPFKERGDDPPLLTLE


h_Ip3r   540  ELSDQKNAPYQHMFRLCYRVLRHSQEDYRKNQEHIAKQFGMMQSQIGYDILAEDTITALL
zf_Ip3r  540  ELSDQKYLLYQYMLRLCYRVLRHSQEDYRKNQEYIAKQFGMMQSQIGYDILAEDTITALL


h_Ip3r   600  HNNRKLLEKHITKTEVETFVSLVRKNREPRFLDYLSDLCVSNHIAIPVTQELICKCVLDP
zf_Ip3r  600  HNNRKLLEKHITKTEVETFVSLVRKNREPRFLDYLSDLCVSNNVAIPVTQELICKCVLNA


h_Ip3r   660  KNSDILIRTELRPVKEMAQSHEYLSIEYSEEEVWLTWTDKNNEHHEKSVRQLAQEARAGN
zf_Ip3r  660  KNQDILMKTERRAAKESQHTSEYLEEFGDEDEVWLIWSEKENEHHEKSIRQLAQEARQGN


h_Ip3r   720  AHDENVLSYYRYQLKLFARMCLDRQYLAIDEISQQLGVDLIFLCMADEMLPFDLRASFCH
zf_Ip3r  720  VHDENVLTYYRYQLKLFARMCFDRQYLAIDVISKQLDIELISLCMMDETLPFDLRASFCR


h_Ip3r   780  LMLHVHVDRDPQELVTPVKFARLWTEIPTAITIKDYDSNLNASRDDKKNKFANTMEFVED
zf_Ip3r  780  LMLHAHVDRDPQELVTPIKFARLWTEIPTSISIKDYDSHLDYSRDNKKNKFANTMAFMEE
```

```
h_Ip3r    840 YLNNVVSEAVPFANEEKNKLTFEVVSLAHNLIYFGFYSFSELLRLTRTLLGIIDCVQGPP
zf_Ip3r   840 YLNNVLIDDLPFANEEKNKLTYEVVSLARHLIYFGFYSFFELLRLTRTLLGIIDCTPSNA


h_Ip3r    900 AMLQAYEDPGGKNVRRSIQGVGHMMSTMVLSRKQSVFSAPSLSAGASAAEPLDRSKFEEN
zf_Ip3r   900 SINPLENDDGSKNVRRSIHGMGQMMSTMVLNRKPSLFSAP----GRTGDSQVGSKDSIDT


h_Ip3r    960 EDIVVMETKLKILEILQFILNVRLDYRISYLLSVFKKEFVEVFPMQDSGADGTAPAFDST
zf_Ip3r   956 QDITVMDTKLKILEILQFILSVRLDYRLSFLLSVFKKEFVDVYPMEDADAT-HHTEHEGN


h_Ip3r   1020 TANMNLDRIGEQAEAMFGVGKTSSMLEVDDEGGRMFLRVLIHLTMHDYAPLVSGALQLLF
zf_Ip3r  1015 RSSINLQHIGEQAEAMFGIGKGNSILEVDDEGGRMFLRVLIHLIMHDYPPLVSGALQLLF


h_Ip3r   1080 KHFSQRQEAMHTFKQVQLLISAQDVENYKVIKSELDRLRTMVEKSELWVDKKGSGKGEEV
zf_Ip3r  1075 KHFSQRQEVLHTFKQVQLLISTQDVDNYKHIKRDLDLLRTMVEKSELWVIKKSSSGGDGK


h_Ip3r   1140 EAGAAKDKKE----RPTDEEGFLHPPGEKSSENYQIVKGILERLNKMCGVGEQMRKKQQR
zf_Ip3r  1135 KD--KKDKKEPEAVSPEEEADSKKQTTEKSNESYQNVKEILERLNKMCSSG--VFKKQQR


h_Ip3r   1196 LLKNMDAHKVMLDLLQIPYDKGDAKMMEILRYTHQFLQKFCAGNPGNQALLHKHLHLFLT
zf_Ip3r  1191 LLKNMGAHKVMLDLLQISYDRNDTKMLEIIKYTHLFLQKFCTGNLENQALLHKHLNLFLT


h_Ip3r   1256 PGLLEAETMQHIFLNNYQLCSEISEPVLQHFVHLLATHGRHVQYLDFLHTVIKAEGKYVK
zf_Ip3r  1251 PRLLEAETMQQIFSNNFQLCSEISESVLHHFIHCLATQGRHIQYLNFLHTIIKAEGKYVK


h_Ip3r   1316 KCQDMIMTELTNAGDDVVVFYNDKASLAHLLDMMKAARDGVEDHSPLMYHISLVDLLAAC
zf_Ip3r  1311 KCQDMIMTELTSAGDDVVVLYTDDTSFNTMVELMTQSREGVKDDSPLRYHISLVELLAAC


h_Ip3r   1376 AEGKNVYTEIKCTSLLPLEDVVSVVTHEDCITEVKMAYVNFVNHCYVDTEVEMKEIYTSN
zf_Ip3r  1371 AEGKNVYTEIKCTSLLPLEEMVKVITHEDCITEVKIAYVNFVNHCYVDTEVEMKEIYTSN


h_Ip3r   1436 HIWTLFENFTLDMARVCSKREKRVADPTLEKYVLSVVLDTINAFFSSPFSENSTSLQTHQ
zf_Ip3r  1431 HIWKLFENFTVDMARVCSNREKRMSDPVLEKYVIQVVLDTVTAFFSSPFSENSTSTEAHH


h_Ip3r   1496 TIVVQLLQSTTRLLECPWLQQQHKGSVEACIRTLAMVAKGRAILLPMDLDAHISSMLSSG
zf_Ip3r  1491 TTVKQLLQSTMRLLDCPWLQPQQKVQVESCIRTLAVTTKSRSIPLPVELEAHVNMMLS--


h_Ip3r   1556 ASCAAAAQRNASSYKATTRAFPRVTPTANQWDYKNIIEKLQDIITALEERLKPLVQAELS
zf_Ip3r  1549 HSNSLTLSRSSHSNKSMSRLTRPAAPTN-PWDYKNIIEKLQDIINTLEERVMPLVNAELS


h_Ip3r   1616 VLVDVLHWPELLFLEGSEAYQRCESGGFLSKLIQHTKDLMESEEKLCIKVLRTLQQMLLK
zf_Ip3r  1608 VLVDVLHQPELLFLEGTDARSRCESGGFISKLIQHTKALMNSDEKLCIKVLRTLQEMLIR
```

```
h_Ip3r   1676 KTKYGDRGNQLRKMLLQNYLQNRKSTSRGDLPDPIGTGLDPDWSAIAATQCRLDKEGATK
zf_Ip3r  1668 ELDFDEKGFALRKVLLQNYLYNNKKNIKAELVEHAGEG-ERDWLTVAALQCRLDKEGGTK


h_Ip3r   1736 LVCDLITSTKNEKIFQESIGLAIHLLDGGNTEIQKSFHNLMMSDKKSERFFKVLHDRMKR
zf_Ip3r  1727 LFTDLITSTKNEKIFQESIQLAICLLEGGNTEIQNSFYKLMMGDNKSEKFFKVLNDRMKN


h_Ip3r   1796 AQQETKSTVAVNMNDLGSQPHEDREPVDPTTKGRVASFSIPGSSSRYSLGPSLRRGHEVS
zf_Ip3r  1787 AQLDIKSTVSVNVGEMSNKAKDDK---DLETGNRNNNFPSGGVSSFGQPEP------QPE


h_Ip3r   1856 ERVQSSEMGTSVLIMQPILRFLQLLCENHNRDLQNFLRCQNNKTNYNLVCETLQFLDIMC
zf_Ip3r  1838 QQEVETEMGPSVTIMKPILRFLQLLCENHNQDLQNFLRIQNNKTNYNLVSETLQFLDIMC


h_Ip3r   1916 GSTTGGLGLLGLYINEDNVGLVIQTLETLTEYCQGPCHENQTCIVTHESNGIDIITALIL
zf_Ip3r  1898 GSTTGGLGLLGLYINENNVELITQTLETLTEYCQGPCQENQTCIVSHECNGIDIITALIL


h_Ip3r   1976 NDISPLCKYRMDLVLQLKDNASKLLLALMESRHDSENAERILISLRPQELVDVIKKAYLQ
zf_Ip3r  1958 NDISPLCRYRMELVLQLKDNASKLLLALMESRHDSENAERILFNLRPRELVELIKKAYLQ


h_Ip3r   2036 EEERENSEVSPREVGHNIYILALQLSRHNKQLQHLLKPVKRIQEEEAEGISSMLSLNNKQ
zf_Ip3r  2018 EGECKEGEVSPREVGHNIYILALQLARHNKVLLTLLKPVKKIKEEEEESISSMINLNKQQ


h_Ip3r   2096 LSQMLKSSAPAQEEEEDPLAYYENHTSQIEIVRQDRSMEQIVFPVPGICQFLTEETKHRL
zf_Ip3r  2078 E----------EEKEDPLEHYDRQTAQIEIVREDRSMEQIVFPVHPICEFLTEESKFRV


h_Ip3r   2156 FTTTEQDEQGSKVSDFFDQSSFLHNEMEWQRKLRSMPLIYWFSRRMTLWGSISFNLAVFI
zf_Ip3r  2127 FTTTEQDEQGSKVTNFFEQTSFLHNEMEWQKKLRSMPVLYWFSRRMSLWGTISFNLAVFI


h_Ip3r   2216 NIIIAFFYPYMEGASTGVLDSPLISLLFWILICFSIAALFTKRYSIRPLIVALILRSIYY
zf_Ip3r  2187 NLIIALFYPHDSGHS-GSIDSSLLLMGFWCFAGLAVLGLLFKRYGFQSLTVAITLRCIYH


h_Ip3r   2276 LGIGPTLNILGALNLTNKIVFVVSFVGNRGTFIRGYKAMVMDMEFLYHVGYILTSVLGLF
zf_Ip3r  2246 FGIGPTLLLLGALNLINKIVYLVSFVGNNGTFIMGYKAMVMDVEFLYHVAYVLTSSLGLF


h_Ip3r   2336 AHELFYSILLFDLIYREETLFNVIKSVTRNGRSILLTALLALILVYLFSIVGFLFLKDDF
zf_Ip3r  2306 VHEFFYSILLFDLIYREETLFNVIKSVTRNGRSILLTAVLAIILVYLFSIVGFLFLRNDF


h_Ip3r   2396 ILEVDRLPNNHSTASPLGMPHGAAAFVDTCSGDKMDCVSGLSVPEVLEEDRELDSTERAC
zf_Ip3r  2366 IMEVDHLAS--------PAPGDTESFMSSCSSDGIDCTEETGLLAPAEEDE--DNTERAC


h_Ip3r   2456 DTLLMCIVTVMNHGLRNGGGVGDILRKPSKDESLFPARVVYDLLFFFIVIIIVLNLIFGV
zf_Ip3r  2416 DTLLMCIITVLNHGLRNGGGVGDVLRKPSKNEPLFPARVVYDLLFYFIVIIIVLNLIFGV
```

```
h_Ip3r   2516 IIDTFADLRSEKQKKEEILKTTCFICGLERDKFDNKTVSFEEHIKLEHNMWNYLYFIVLV
zf_Ip3r  2476 IIDTFADLRSEKQKKEEVLKTTCFICGLERDKFDNKTVSFEEHIKLEHNIWNYLYFIVLI


h_Ip3r   2576 RVKNKTDYTGPESYVAQMIKNKNLDWFPRMRAMSLVSNEGEGEQNEIRILQDKLNSTMKL
zf_Ip3r  2536 REKNKTDYTGPESYVALMIKNKNLDWFPRMQAMSLVVTDGDGEQNEMRNLQDRLSSTMKV


h_Ip3r   2636 VSHLTAQLNELKEQMTEQRKRRQRLGFVDVQNCISR-----------------
zf_Ip3r  2596 VTQLTSQLTELKEQMTEQRKRRQRMGFVDVQSGSNPGMPVPPSPAGGNQVYKA
```

```
h_Pi4kb     1 ---------MRFLEARSLAVAMGDTVVEPAPLKPTSEP---TSGPPGNNGGS-----LLS
zf_Pi4kb    1 MGDTELELSPTHLEELQKSPSTSTTSSLSLPSSPSSGPHPLTSSSPSTSEGLPTSSPPLD


h_Pi4kb    44 VITEGVGELS-VIDPEVAQKACQEVLEKVKLLHGGVAVSSRGTPLELVNGDGVDSEIRCL
zf_Pi4kb   61 VISEGLGELSLVIDTEVAKKACQEVLQKVKFLKGDGEVSSASSEPILANG-TAHPEANDG


h_Pi4kb   103 DDPPAQIREEEDEMGAAVASGTAKGARRRRQNNSAKQSWLLRLFESKLFDISMAISYLYN
zf_Pi4kb  120 GQPP-KISEEEVEP--------IKSVRRRQKNNSSKQSWLLRLFESKLFDISMAISYLYN


h_Pi4kb   163 SKEPGVQAYIGNRLFCFRNEDVDFYLPQLLNMYIHMDEDVGDAIKPYIVHRCRQSINFSL
zf_Pi4kb  171 SKEPGVQAYIGNRLFSFRNEDVDFYLPQLLNMYIHMDEDVGDAIKPYVVYRCRQSINFSL


h_Pi4kb   223 QCALLLGAYSSDMHISTQRHSRGTKLRKLILSDELKPAHR--KRELPSLSP---------
zf_Pi4kb  231 QCAWLLGAYSSDMHISTQRHSRGTKLRKLILSDELKPSSQRIRREVPQPPPPYPPPLHHG


h_Pi4kb   272 --APDTGLSPSKRTHQRSKSDATASISLSSNLKRTASNPKVENEDEELSSSTESIDNSFS
zf_Pi4kb  291 PGMSEHSLSPSKRTHQRSKSDATVSISLSSNLKRTASNPKVETSQDELSFPLS--TSFLS


h_Pi4kb   330 SPVRLAPEREFIKSLMAIGKRLATLPTKEQKTQRLISELSLLNHKLPARVWLPTAGFDHH
zf_Pi4kb  349 QPVRLTPQREFIKSLMGIGKRLATLPTKEQKTQRLISELSLLNHKLPARVWLPTAAFDHH


h_Pi4kb   390 VVRVPHTQAVVLNSKDKAPYLIYVEVLECENFDTTSVPARIPENRIRSTRSVENLPECGI
zf_Pi4kb  409 VVRVPHTQAVVLNSKDKAPYLIYVEVLECENFETSSVPVRIPETQIRSTRSVENLPDCGI


h_Pi4kb   450 THEQRAGSFSTVPNYDNDDEAWSVDDIGELQVELPEVHTNSCDNISQFSVDSITSQESKE
zf_Pi4kb  469 TPDQRASSFSTVPNYDNDDEAWSVDDIGELQVELPEIHTNSCDNISQFSVDSITSQESKE


h_Pi4kb   510 PVFIAAGDIRRRLSEQLAHTPTAFKRDPEDPSAVALKEPWQEKVRRIREGSPYGHLPNWR
zf_Pi4kb  529 PIFIAAGDIRRRLSEQLAHTPTTFRKDPEDPSAVALKEPWQEKVRRIREGSPYGHLPNWR


h_Pi4kb   570 LLSVIVKCGDDLRQELLAFQVLKQLQSIWEQERVPLWIKPYKILVISADSGMIEPVVNAV
zf_Pi4kb  589 LLSVIVKCGDDLRQELLAYQVLKQLQIIWEQERVPLWIKPYKILVISSDSGMIEPVVNAV


h_Pi4kb   630 SIHQVKKQSQLSLLDYFLQEHGSYTTEAFLSAQRNFVQSCAGYCLVCYLLQVKDRHNGNI
zf_Pi4kb  649 SIHQVKKQSQLLLLDYFRQEHGNFNTEEFLTAQRNFVQSCAGYCLICYLLQVKDRHNGNI


h_Pi4kb   690 LLDAEGHIIHIDFGFILSSSPRNLGFETSAFKLTTEFVDVMGGLDGDMFNYYKMLMLQGL
zf_Pi4kb  709 LLDSEGHIIHIDFGFILSSSPRNLGFETSAFKLTSEFVDVMGGLDGDMFNYYKMLMLQGL


h_Pi4kb   750 IAARKHMDKVVQIVEIMQQGSQLPCFHGSSTIRNLKERFHMSMTEEQLQLLVEQMVDGSM
zf_Pi4kb  769 IAARKHMEKVIQIVEIMQQGSQLPCFHGSSTIRNLKERFHMNLTEEQLQVLVEQMVDGSM
```

```
h_Pi4kb   810 RSITTKLYDGFQYLTNGIM----------------------------------------
zf_Pi4kb  829 RSITTKLYDGFQYLTNGIMDEDSLILGHLLVVAKNIAKKEGLAEGYRVVINDGKNGAQSV


h_Pi4kb       ------------------
zf_Pi4kb  889 YHLHIHVLGGRQMKWPPG
```

```
h_Pink1     1 MAVRQALGRGLQLGRALLLRFTGKPGRAYGLGRPGPAAGCVRGERPGWAAGPGAEPRRVG
zf_Pink1    1 MSVKHVLSRGLELGRSVFQLGLLKP--------AGRVAAKFRGER--LRVSRPTRTVQPQ


h_Pink1    61 LGLPNRLRFFRQSVAGLAARLQRQFVVRAWGCAGPCGRAVFLAFGLGLGLIEEKQAESRR
zf_Pink1   51 TFLPGRYRFFRLSVSGLAAQLQSGAFRRVIGGCSARNRAVFLAFGVGLGLIEQEQEEDRT


h_Pink1   121 AVSACQEIQAIFTQK-SKPGPDPLDTRRLQGFRLEEYLIGQSIGKGCSAAVYEATMPTLP
zf_Pink1  111 SAALCQEIQAVFRKKKFQSLPKPFTS----GYRLEDYVIGKQIGKGCNAAVYEAAAPFAP


h_Pink1   180 QNLEVTKSTGLLPGRGPGTSAPGEGQERAPGAPAFPLAIKMMWNISAGSSSEAILNTMSQ
zf_Pink1  167 PVESKKCSLVELNPKEAEDDNKKEEPLRLSASPSFPLAMKMMWNIGAGSSSDAILRSMSM


h_Pink1   240 ELVPASRVALAGEYGAVTYR-KSKRGPKQLAPHPNIIRVLRAFTSSVPLLPGALVDYPDV
zf_Pink1  227 ELVPSCPQALRKEQGELTLNGHFGAVPKRLSAHPNVITVYRAFTAEVPLLPGAREEYPDV


h_Pink1   299 LPSRLHPEGLGHGRTLFLVMKNYPCTLRQYLCVNTPSPRLAAMLLQLLEGVDHLVQQGI
zf_Pink1  287 LPARLNPHGLGSNRTLFLVMKNYPCTLRQYLEVCVPKRTQASLMFLQLLEGVDHLCRQNI


h_Pink1   359 AHRDLKSDNILVELDPDGCPWLVIADFGCCLADESIGLQLPFSSWYVDRGGNGCLMAPEV
zf_Pink1  347 AHRDLKSDNILLEFDNTGCPRLVITDFGCCLAEDS-GLKLPFSSWWVNRGGNSCLMAPEV


h_Pink1   419 STARPGPRAVIDYSKADAWAVGAIAYEIFGLVNPFYGQGKAHLESRSYQEAQLPALPESV
zf_Pink1  406 STAVPGPGVVIDYSKADVWAVGAIAYELFGQPNPFY-----TLESRSYQEKQLPALPAAA


h_Pink1   479 PPDVRQLVRALLQREASKRPSARVAANVLHLSLWGEHILA-LKNLKLDKMVGWLLQQSAA
zf_Pink1  461 PDDVQLVVKLLLRKNPHKRPSARVAANILHISLWGRRVLAGLDKVQMAEMMAWLQCQSAV


h_Pink1   538 TLLANRLTEKCCVETKMKMLFLANLECETLCQAALLLCS----WRAAL------
zf_Pink1  521 VLLKGRGRDQSSVEAELQRSFLANIELEDLRTAVSFLTYERKQWRYLLMSNSQP
```

```
h_Slc25a25    1  MLCLCLYVPVIGEAQTEFQYFESKGLPAELKSIFKLSVFIPSQEFSTYRQWKQKIVQAGD
zf_Slc25a25   1  MLCLCLYVPVHNSDQIEVEYFESNGLPSELKSLKSLSVLLPSQEFSTYRRWRKKSLKTEE


h_Slc25a25   61  KDLDGQLDFEEFVHYLQDHEKKLRLVFKSLDKKNDGRIDAQEIMQSLRDLGVKISEQQAE
zf_Slc25a25  61  KEHDGQLDFEEFVHYLQDHEKDLKLVFKSMDRKIAGQVNANDIVNSLRDLGVHISLKQAE


h_Slc25a25  121  KILKSMDKNGTMTIDWNEWRDYHLLHPVENIPEIILYWKHSTIFDVGENLTVPDEFTVEE
zf_Slc25a25 121  KVLKSMDKNGTMTIDWNEWKKYPTLQPAENIPEIILYWKHSTIFDVGESLMVPDEFTVEE


h_Slc25a25  181  RQTGMWWRHLVAGGGAGAVSRTCTAPLDRLKVLMQVHASRSNNMGIVGGFTQMIREGGAR
zf_Slc25a25 181  HLTGMWWRHLVSGGGAGAVSRTCTAPLDRLKVLMQVHGCQGKSMCLMSGLTQMIKEGGVR


h_Slc25a25  241  SLWRGNGINVLKIAPESAIKFMAYEQIKRLVGSDQETLRIHERLVAGSLAGAIAQSSIYP
zf_Slc25a25 241  SLWRGNGINVIKIAPETALKFMAYEQIKRVMGSSQETLGISERFVAGSLAGVIAQSTIYP


h_Slc25a25  301  MEVLKTRMALRKTGQYSGMLDCARRILAREGVAAFYKGYVPNMLGIIPYAGIDLAVYETL
zf_Slc25a25 301  MEVLKTRLALRKTGQYKGISDCAKHILKTEGMSAFYKGYVPNMLGIIPYAGIDLAVYETL


h_Slc25a25  361  KNAWLQHYAVNSADPGVFVLLACGTMSSTCGQLASYPLALVRTRMQAQASIEGAPEVTMS
zf_Slc25a25 361  KNTWLQRYGTENADPGVFVLLACGTVSSTCGQLASYPLALIRTRMQAQASVEGSSQVSMT


h_Slc25a25  421  SLFKHILRTEGAFGLYRGLAPNFMKVIPAVSISYVVYENLKITLGVQSR
zf_Slc25a25 421  GLFKQIMKTEGPTGLYRGLTPNFLKVIPAVSISYVVYEHIKSTLGVRSR
```

```
h_Trpc1     1  ------------------------------------------------------------
zf_Trpc1    1  MGISEEEWERLQKALEWPSPDQEITELSESTSPDHSTFTIVGLNQNYSVGEKILVTITSR


h_Trpc1     1  ------------------------------------------------------------
zf_Trpc1   61  DHNNKLKRYGGDFFKVKLFNSELKASVYGEVVDHRNGTYSASLLLPWEGQAQVSVRLEHS


h_Trpc1     1  ------------------------------------------------------------
zf_Trpc1  121  SEVVQILKKYRESSFTRSHYNGHFEGPGPNKTRISEVVPCNLKWGGNGSWIKGNCCCEYK


h_Trpc1     1  ------------------------------------------------------------
zf_Trpc1  181  DIKTGTVWHCIKRMDLHTPPTGGPLMAVELTNNIIVHWGPHGVPLRFTKMLITDLHYISN


h_Trpc1     1  ------------------------------------------------------------
zf_Trpc1  241  DIDEIAGGSHAVIVFTIAAHLVFHPLTFYVHEVAKIRQSVVSLLSRAPETLVIIKSGNTA


h_Trpc1     1  ----------------MMAALYPSTD--------------------------LSGASS
zf_Trpc1  301  GQKDIFQSDWYAMQLNTVMQEMFRDIDAVIYFDVWQMTSCHYLHDDVHPGCKALLSGMHI


h_Trpc1    17  SSLPSSP-----------SSSSPNEVMALKDVREVKEENTLNEKLFLLACDKGDYYMVKK
zf_Trpc1  361  SALPYSLSVIMAALYQGTDSSSPDKYLALKDVREVKEETTLDEKLFLLACEKGDYYMVKK


h_Trpc1    66  ILEENSSGDLNINCVDVLGRNAVTITIENENLDILQLLLDYGCQKLMERIQNPEYSTTMD
zf_Trpc1  421  LLEEKRHGELNINCVDVLGRDAVTISIENENLDILQLLLDHGCQKLIQKIQNPEYSTTMD


h_Trpc1   126  VAPVILAAHRNNYEILTMLLKQDVSLPKPHAVGCECTLCSAKNKKDSLRHSRFRLDIYRC
zf_Trpc1  481  VAPVILAAHRNNYEILTMLLKQDISLPRPHAVGCECTLCNAKNKKDSLRHSRFRLDIYRC


h_Trpc1   186  LASPALIMLTEEDPILRAFELSADLKELSLVEVEFRNDYEELARQCKMFAKDLLAQARNS
zf_Trpc1  541  LASPSLIMLTEEDPILRAFELSADLKELSLVEVEFRNDYEELAKQCKMFAKDLLAQARNS


h_Trpc1   246  RELEVILNHTSSDEPLDKRGLLEERMNLSRLKLAIKYNQKEFVSQSNCQQFLNTVWFGQM
zf_Trpc1  601  RELEVILNHTSSEDHVDKRGLLEERMNLSRLKLAIKYNQKEFVAQSNCQQFLNTVWFGEM


h_Trpc1   306  SGYRRKPTCKKIMTVLTVGIFWPVLSLCYLIAPKSQFGRIIHTPFMKFIIHGASYFTFLL
zf_Trpc1  661  ASYRRKHTCLKIVSVLSVALLWPLLSICYLLGPRSRVGQVIHTPFIKFIIHSASYFTFLL


h_Trpc1   366  LLNLYSLVYNEDKKNTMGPALERIDYLLILWIIGMIWSDIKRLWYEGLEDFLEESRNQLS
zf_Trpc1  721  LLNLYSLIYN-DKKN-MAPALQFIDYLLILWIIGMVWSDVKRLWYEGLEDFLEESRNQLS


h_Trpc1   426  FVMNSLYLATFALKVVAHNKFHDFAD---RKDWDAFHPTLVAEGLFAFANVLSYLRLFFM
zf_Trpc1  779  FVMNSLYLATFALKIVAHNKYSKIIKPEERKEWDAFHPTLVAEGLFAFAIVLSYLRLFFM
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h_Trpc1    483 YTTSSILGPLQISMGQMLQDFGKFLGMFLLVLFSFTIGLTQLYDKG----YTSKEQKDCV
zf_Trpc1   839 YTTSSILGPLQISMGQMLQEFGKFLGLFLLVLISFTIGLTQLYGKDQDPSKTKDDNKDCE


h_Trpc1    539 GIFCEQQSNDTFHSFIGTCFALFWYIFSLAHVAIFVTRFSYGEELQSFVGAVIVGTYNVV
zf_Trpc1   899 GIYCQQQSNDTFHTFMGTCYALFWYIFSLAHVNLFVTRISYTEELRSFVGALIVGTYNIV


h_Trpc1    599 VVIVLTKLLVAMLHKSFQLIANHEDKEWKFARAKLWLSYFDDKCTLPPPFNIIPSPKTIC
zf_Trpc1   959 VVIVLTKLLVAMLHKSFRQIANHEDKEWKFARAKLWLSYFDDKCTLPPPFNVLPSPKTVC


h_Trpc1    659 YMISSLSKWICSHTSKGKVKRQNSLKEWRNLKQKRDENYQKVMCCLVHRYLTSMRQKMQS
zf_Trpc1  1019 YLVISMSKWICSHTSTGKVKRQNSLREWTNLKQKRDQNYQKIMCCLVHRYLTSTRQKMQS


h_Trpc1    719 TDQATVENLNELRQDLSKFRNEIRDLLGFRTSKYAMFYPRN
zf_Trpc1  1079 MDQATVENLNDLRQDLSKFRNEMRDLLGFRTSKYAMFYPRS
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h_Trpc5     1  ---MAQLYYKKVNYSPYRDRIPLQIVRAETELSAEEKAFLNAVEKGDYATVKQALQEAEI
zf_Trpc5    1  MNPMSHLYYKKSSYSPYRDRIPLQIVRAEVELSPEERAFLSAVEKGDYAGVQHALREAEV


h_Trpc5    58  YYNVNINCMDPLGRSALLIAIENENLEIMELLLNHSVYVGDALLYAIRKEVVGAVELLLS
zf_Trpc5   61  YYNIDTNCVDPLGRSALLIAIENENLEVMELLLDHGVNTGDALLYAIRKEVVGAVELLLS


h_Trpc5   118  YRRPSGEKQVPTLMMDTQFSEFTPDITPIMLAAHTNNYEIIKLLVQKRVTIPRPHQIRCN
zf_Trpc5  121  HRKPSGEKQVPSLMMDAQFSEFTPDITPIMLAAHTNNYEIIKLLVQRKVTIPRPHQIRCD


h_Trpc5   178  CVECVSSSEVDSLRHSRSRLNIYKALASPSLIALSSEDPILTAFRLGWELKELSKVENEF
zf_Trpc5  181  CVECVSSSEVDSLRHSRSRLNIYKALASPSLIALSSEDPILTAFRLGWELKELSKVENEF


h_Trpc5   238  KAEYEELSQQCKLFAKDLLDQARSSRELEIIILNHRDDHSEELDPQKYHDLAKLKVAIKYH
zf_Trpc5  241  RQEYEELSQQCKLFAKDLLDQARSSRELETILNHRDDQSEELDPRECRDLAKLKLAIKYH


h_Trpc5   298  QKEFVAQPNCQQLLATLWYDGFPGWRRKHWVVKLLTCMTIGFLFPMLSIAYLISPRSNLG
zf_Trpc5  301  QKEFVAQPNCQQLLATLWYDGFPGWRRRHWAVKLVMCFIIGLLFPVFSLVYLLAPKSTLG


h_Trpc5   358  LFIKKPFIKFICHTASYLTFLFMLLLASQHIVRTDLHVQGPPPTVVEWMILPWVLGFIWG
zf_Trpc5  361  LFIKKPFIKFICHTASYLTFLFLLLLASQHIARTNLHMQGPPPTVVEWMILPWVLGFIWA


h_Trpc5   418  EIKEMWDGGFTEYIHDWWNLMDFAMNSLYLATISLKIVAYVKYNGSRPREEWEMWHPTLI
zf_Trpc5  421  EIKEMWDGGFNEYVHDWWNLMDFAMNSLYLATISLKIVAYVKYNSSRPREEWEMWHPTLI


h_Trpc5   478  AEALFAISNILSSLRLISLFTANSHLGPLQISLGRMLLDILKFLFIYCLVLLAFANGLNQ
zf_Trpc5  481  AEALFAIANIFSSLRLISLFTANSHLGPLQISLGRMLLDILKFLFIYCLVLLAFANGLNQ


h_Trpc5   538  LYFYYETRAIDEPNNCKGIRCEKQNNAFSTLFETLQSLFWSVFGLLNLYVTNVKARHEFT
zf_Trpc5  541  LYFYYETEAADEPNHCKGIRCERQNNAFST------------------------------


h_Trpc5   598  EFVGATMFGTYNVISLVVLLNMLIAMMNNSYQLIADHADIEWKFARTKLWMSYFDEGGTL
zf_Trpc5       ------------------------------------------------------------


h_Trpc5   658  PPPFNIIPSPKSFLYLGNWFNNTFCPKRDPDGRRRRRNLRSFTERNADSLIQNQHYQEVI
zf_Trpc5       ------------------------------------------------------------


h_Trpc5   718  RNLVKRYVAAMIRNSKTHEGLTEENFKELKQDISSFRYEVLDLLGNRKHPRSFSTSSTEL
zf_Trpc5       ------------------------------------------------------------


h_Trpc5   778  SQRDDNNDGSGGARAKSKSVSFNLGCKKKTCHGPPLIRTMPRSSGAQGKSKAESSSKRSF
zf_Trpc5       ------------------------------------------------------------
```

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h_Trpc5    838 MGPSLKKLGLLFSKFNGHMSEPSSEPMYTISDGIVQQHCMWQDIRYSQMEKGKAEACSQS
zf_Trpc5       ------------------------------------------------------------


h_Trpc5    898 EINLSEVELGEVQGAAQSSECPLACSSSLHCASSICSSNSKLLDSSEDVFETWGEACDLL
zf_Trpc5       ------------------------------------------------------------


h_Trpc5    958 MHKWGDGQEEQVTTRL
zf_Trpc5       ----------------
```

```
h_Vamp2    1 MSATAATAPPAAPAGEGGPPAPPPNLTSNRRLQQTQAQVDEVVDIMRVNVDKVLERDQKL
zf_Vamp2   1 -----MSAPAGAPAPEGGNQAPP-NLTSNRRLQQTQAQVDEVVDIMRVNVDKVLERDQKL


h_Vamp2   61 SELDDRADALQAGASQFETSAAKLKRKYWWKNLKMMIILGVICAIILIIIIVYFST
zf_Vamp2  55 SELDDRADALQAGASQFETSAAKLKNKYWWKNAKMMIILGVICVIVLIIIIVYFST
```