

T18*

1 -----MARR-----FQEELAAFLFEYDTPRMVLVRNKKVGVIFRLIQLVVLVYVGVWFVLEY hP2X1
 1 -----MVR-----LARGCWSAFWDYETPKVIVVRNRKGLFVHRMVQQLLILLYFVWVYFVQK rP2X2
 1 -----MAG-----CCSALAAFLFEYDTPRIVLIRSRKQVGLMNRARQLLILAYVYGVWFVWEK hP2X4
 1 -----MVK-----GIAVLFEYETPKLVQISNLIKIGVITRRLQVLILVYVVCWVMLEY SmP2X
 1 -----MGLSYTQKSVVIRSWRLGALYGYGLVAVVLAYVGVFFLVVVER OtP2X
 1 -----MAASGFWGSIQGGIYSMLFYDLTKTVHIRSKKVLGIFRLQITILAYVGVYGIYQK MbP2X
 1 -----MGFS-----FDWDDIFQYSTVKVIRIDRRLGLHLSPFLVGIYVAYIVVYSATIKK dPXAX
 1 MTNFTNTNEQEKLSY-----AKRKALDFFFEYETPKVKVYSTRLGAINRTVQFLVIGYVIGYIFYAK HdP2X

TM1

54 GYQTS-SGLISSVS**K**LKGLAVTQLPGL-----GPQVWDVADYVFPAAQGDNSFVVMNTFIVTPK hP2X1
 54 SYQDSETPGESSII**T**KVKGITMSD-----KVMDVEEYVKPPEGGSVSIITRIEVTPS rP2X2
 53 GYQET-DSVVSSV**T**KVKGVAVNTSKL-----GFRIDWDVADYVIPAQEEENSLFVMTNVLTMN hP2X4
 49 GQEN-DIAKSAV**T**KVKGVGFNTFSHPG-----IGMRSDVADYIVPPLLENALFVITNLVTKM SmP2X
 43 GYQRT-SRAVGNIG**L**KVKQGAITLRDATG-----ATLVYDANDLVMYEPG-----FFATATALAT OtP2X
 58 GQEV-DSAVSTVL**T**KVKGIAITCDNTDISMNDVCPGDLRVWDTDPYIKPAQENDAFFVVSNSIQTSK MbP2X
 51 GYLFT-EVPIGSV**R**SLKGPNTFASNLY-----CSNQHQNGSYPFTPLECN-----YWDEQLALFPV dPXAX
 66 GYQAF-EKAEST**T**IAKVKGMIKNTFASSTG-----ANNVWDATDLVIPSAEENDAVFITTNFIQTPS HdP2X

E110

112 QTO-----GYCAEHPEGG-----ICKEDSG**C**TGPKAKRKAQGIRTG**C**VAFN-DT-----VKTCEIFGW hP2X1
 108 QTL-----GTCPESMRVHSS**T**CHSDD**C**IAQGLDMQGNIGRTG**H**CVPYHGD-----SKTCEVSAW rP2X2
 111 QTO-----GLCEIPDATT-VCKSDAS**C**TAGSAGTHSNVSTGR**C**VAFN-GS-----VKTCEVAAW hP2X4
 110 QSL-----SKCESSWVPEAA**C**YKDS**D**CKPYFISHLNGAHTG**K**CIKPGND-----IGSCEIYSW SmP2X
 99 QAR-----GRCPMDDE-D**T**CEDAS**C**VPVFTFSP-----SGRMTGCQVATALKDEDGKVVKRCEVEG OtP2X
 126 QTORAEGWDEDPAA**P**VTGSASAF**N**CTSDAD**C**PRFATSR-----NGALTGECNTTT-----ERCRIYGW MbP2X
 109 QGD-----STPTCTTRVR-----LSKQEAEN**C**NTDPTCK-----FVDEPGSAKN-----IYADIESF dPXAX
 126 QQS-----GKCPEDTNNKFAR**C**TDSDG**C**TAGEQVLLNGFKTG**C**VQAT-----GTCEIDGW HdP2X

K130

C165* **F185*** **C149*** **C159***
 165 CPVEVDDDDIP-----RPALLREAE**N**TLFIKNSISFPRFKVNRNILEEVNAAHMKT**L**CFHK**T**--L hP2X1
 164 CPVEDGTS**D**N-----H-FLGKMAP**N**TLFIKNSIHYPKFKFSKNIASQ**K**-SDY**L**K**H**CTFD**D**--S rP2X2
 165 CPVEDDTH**V**P-----QPAFLKAA**N**TLFIKNSIHYPKFKFSKNILNPITTYLK**S**CIDY**A**K--T hP2X4
 166 CPLENDELPLGR-----KSFLPFMVNY**T**LLIKNDINFEKFGIHRNIQNWASKFLRTCLYN**K**TD**P**E SmP2X
 156 CGPEPEKDE**V**-----TVLENVGN**T**LVTRISVEFP-----GIPDEDEGNNMLW**T**NLNGTKPTLG-- OtP2X
 184 GPVESKDEDDRAT**D**GLFYARHMPAV**K**NTVYIKNTVFFORFGAKFGSTDESD-KVDVY**T**CTWSP**T**G-L MbP2X
 157 TILIDHTMYAS-----SSGSQFNAVDLHG**I**LNQDGEVQIDANGTSIGVSGKPD**M**ITMG-- dPXAX
 178 CPAEVDDDK**P**E-----PPIFMEAE**N**TLIMVKNYVTFPEFDVKRRNIPDDMKGAYINT**C**RY**H**PV--S HdP2X

D183

C227* **C261*** **C270*** **H232**
 224 HPLC**P**V**F**Q**L**G-YVVQES**Q**-NFSTLAE**K**-GGVVGITID**C**W**H**CDL**D**DW**H**VR**H**CRPIYEFHGLYE---EKNLS hP2X1
 221 DPY**C**P**I**FR**L**G-FIVEKAGE-NFTEL**A**HK-GGVIGV**I**INW**N**CDL**D**DESE**C**NPKYSFRR**L**DP--KYDPA rP2X2
 224 DP**F**C**P**IFR**L**G-KIVENAG**H**-SFQDM**A**VE-GGIMG**I**QVNW**D**CN**L**DRA**S**L**C**LPYR**S**FRR**L**DRD**V**EHNV hP2X4
 229 NR**C**P**I**FO**F**G-TIFEEAN**V**-QDS**I**FS---GGVIGIDW**K**CDL**D**DW**V**Q**C**NP**T**YSFRR**L**DD--AHAKIA SmP2X
 210 ---WNLWTIN-DLLESG**M**-SVKEV**A**RK-GWDGRVDVEFD**C**N**L**DRGID**A**CA**P**K**T**PY**T**-LKQV**M**HP**N**TLS OtP2X
 251 ER**H**C**I**FK**I**D-TILNEAG**I**TDFENQAMR**G**ALITIQVNY**D**CN**L**DS**A**HT**C**SP**T**YK**T**R**L**DT---KSDLS MbP2X
 212 ---QLLSFGGV**S**LQAS**P**DSNV**S**IRYDGVVLVFFITYSNTY**S**TSYSD**F**KVY**S**Q**I**AN--TIDV**P** dPXAX
 236 DPY**C**P**I**FT**V**Q-RLV**E**LA**H**E-NFSV**V**ART-GAIFGFI**E**W**D**CN**L**DFS**V**EY**C**L**P**KYQIR**R**IDS---VEEK**I**A HdP2X

E249 H252

F291* **K309***
 287 PG**F**N**R**FAK-----HFVENGT---N-YRHL**E**Y**G**IRFIDILVDGKAGKFDI**P**TMT**T**IGS hP2X1
 285 SGY**N**FR**F**AK-----YYKING**T**---TTTRTL**I**KAYGIRIDVIVHGQAGKFS**L**IPT**M**TI**N**LAT rP2X2
 290 PG**F**N**R**FAK-----YYRDL**A**G---NEQRTL**I**KAYGIRFDI**V**FGKAGKFDI**P**TM**T**IN**L** hP2X4
 292 SG**F**N**R**FA**H**-----FYSENG**T**---N-YRDL**I**KAYGIRFIVHVGSEAGK**F**HL**L**PT**M**NI**G**S SmP2X
 272 EGFNIRWISQ**N**VGEPSA**Q**AGV**V**Y**S**NE**T**ANG**P**GK**D**VR**L**LL**K**YGG**P**RI**R**FEV**T**GVGR**K**FDW**L**T**L**ST**V**GA OtP2X
 316 AGY**N**FR**F**AN-----YQID**P**P-----ARD**L**Y**K**YGLRVFV**V**SG**T**AG**R**FS**M**PLL**V**ALGS MbP2X
 275 ETI**I**LES**I**H-----SRLLY**K**R**H**GIRVFIQ**T**GTIG**S**FF**H**Q**T**LL**L**TL**V**S dPXAX
 300 KGW**N**FR**H**AD-----YWN**A**PDG---TRRR**T**LY**K**FYGIKFV**M**VY**G**KAG**R**FS**P**EEL**A**M**N**LG**S** HdP2X

H306

338 GIG**F**GVATV**L**CD**L**LL**L**HL**P**KR**H**Y**K**Q**K**FK-----YAEDMG**P** hP2X1
 337 AL**T**S**I**GVGS**F**CD**L**W**L**LL**T**FM**N**KN**L**Y**S**HK**F**K**D**KV**R**TP**K**HP**S**SR**W**PV**T**LALV**L**G**I**PP**P**SS**H**YSQ**D**GP rP2X2
 342 G**L**AL**G**MA**T**V**L**CD**I**IV**L**Y**C**MM**K**R**L**Y**R**Q**K**Y**K**-----YVEDY**E**Q**H** hP2X4
 343 G**L**ALL**G**L**A**PT**V**CD**I**AL**N**LL**R**SD**I**Y**R**A**K**F**E**T-----IAEE**A**Q**L** SmP2X
 341 G**V**AFL**G**IAS**L**VVN**A**VM**M**Y**C**S**G**-----PK**S**Q**Y**E**S**-----WL**F**A**E**F**H**ED**I** OtP2X
 365 GL**G**L**L**GL**A**T**V**AD**L**LV**T**K**O**IR**N**AN**V**Y**G**L**K**Y**Q**-----V**V**DE**D** MbP2X
 318 GL**L**LA**V**AT**V**VD**L**LA**I**RL**P**Q**R**K**S**Y**S**SL**K**F**Q**-----V**T**ES**M**NP dPXAX
 352 G**I**GL**G**IA**T**IL**C**DF**L**TD**F**LL**R**-T**D**AF**G**K**S**K**F**ER**I**RD**T**K-----KG**P**PT**L**K**T**ML**E**NA**K**PP**G**AV**M**VI**E**NE**P**D HdP2X

TM2

378 -----AAERDLATSS-----TLGLQENM**R**TS hP2X1
 406 PPSGEG**P**TLGEG**A**EL**P**LAV**Q**SP**R**PC**S**ISAL**T**EQ**V**VD**T**L**G**Q**H**MG**Q**R**P**VP**P**EP**S**Q**D**ST**S**TD**P**K**G**LA**Q**L rP2X2
 382 -----LAS-EL**D**Q hP2X4
 384 SS---R---RAD**K**AQ**R**K**K**Y**L**SK**R**NT**E**TIN**E**NSD**E**NG**K**II**Q**W**K**DD**Q**E**F**TV**S**DT**Q**TI**H**SS**T** SmP2X
 380 -----YGS**T**EE**A**T OtP2X
 405 R-----AGID**H**IP**I**D**Q**-----K**L**ER**Q**PL**L**P MbP2X
 358 -----MK**R**IT**T**DE**G**E-----D**V**LY**T**RI**E**GL dPXAX
 417 AD**P**DA**S**T**L**DD**S**SS**D**ED**G**STR**G**LE**Q**TP**S**GD**S**GF**G**VAR**E**K**H**FL**D**DP**K**VB**H**Q**R**TR**V**TS**L** HdP2X