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 LOC\_Os02g35140.1|11668.m03331/1-757  
 LOC\_Os02g41800.1|11668.m03990/1-784  
 LOC\_Os04g57610.1|11670.m05695/1-819  
 LOC\_Os04g43910.1|11670.m04249/1-696  
 LOC\_Os04g49230.1|11670.m04840/1-294  
 LOC\_Os04g36060.1|11670.m03490/1-1674  
 LOC\_Os05g43920.1|11682.m04181/1-700  
 LOC\_Os06g09660.1|11680.m00929/1-1056  
 LOC\_Os06g46410.1|11680.m04579/1-918  
 LOC\_Os06g47150.1|11680.m04656/1-731  
 LOC\_Os06g48950.1|11680.m04850/1-1116  
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MPL PSCRRRQRPRQSCFQNPPECHRL RARQQRQESAVQSTLSSSI YFSDHFVLT P PPFQI TPTS I QNSTWL P I PT SP AVAAPPL PRCL GGV DGE GAPCAPPPSP

### Consensus



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 LOC\_Os02g41800.1|11668.m03990/1-784  
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 LOC\_Os04g43910.1|11670.m04249/1-696  
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-----MEMAANPGSGTCDALFRELWHACAGPLV-TVPKRGERVYVYFPQGHMEQ
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## Consensus



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 LOC\_Os04g49230.1|11670.m04840/1-294  
 LOC\_Os04g36060.1|11670.m03490/1-1674  
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320      330      340      350      360      370      380      390      400      410      420
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LOC_Os01g13520.1|11667.m01333/1-700          ---LQEPDTP---ALLAEQIKMFMQVPPYKI---LCKVNVNELKAEQDTEDEYVAQITLQP-DPQDENL-----PT
LOC_Os02g06910.1|11668.m00642/1-909          ---VAASTNK---EMESQIPNYPNLPPQL---ICQLHNVTHMADAETDEYVAQMTLQP-LSPOELK-----
LOC_Os02g35140.1|11668.m03331/1-757          ---LEASTD---QQLDQHLPLFNLPSKII---LCKVNVNELRAEATDSDEYVAQIMLQP-EADQNE-----LT
LOC_Os02g41800.1|11668.m03990/1-784          ---ALGLAAPLESAARVPALV---PCRVASVRYMADPDTDEYFARIRLVP-LRA-----AE
LOC_Os04g57610.1|11670.m05695/1-784          ---VAASTNK---EVEGHIIPNYPNLPAQL---ICQLHDVTHMADVETDEYVAQMTLQP-LNPQEQN-----
LOC_Os04g43910.1|11670.m04249/1-696          ---ASAAVDLSSARVPPLV---PCRVAVVRFMADAESDEYFAKIRLVPRLPGDAVVD-----VG
LOC_Os04g49230.1|11670.m04840/1-294          ---ATASSSSPTSVSPSAT---ASAAASTSASGSPFRSSDGA-----GA
LOC_Os04g36060.1|11670.m03490/1-1674         ---LEASTN---QQLDQYLPFNLPSKII---LCSVVNVELRAEADSDEYVAQIMLQP-EADQSE-----LT
LOC_Os05g43920.1|11682.m04181/1-700          ---DGGGGEVPPAGAAAVPPHV---ACRVVGVLELRADAETDEYVARLALVAEGEMLQRNFREGG---GE
LOC_Os06g09660.1|11680.m00929/1-1056         ---VAASMNH---KELDNIIPGYPSLPSKLI---ICKLLSLTLHADSETDEYVAQMTLQP-VNKYDRDA-----ML
LOC_Os06g46410.1|11680.m04579/1-918          ---VAASTNK---EMESQIPNYPNLPPQL---ICQLHNVTHMADAETDEYVAQMTLQP-LSPOELK-----
LOC_Os06g47150.1|11680.m04656/1-731          ---AQQHGVPVEFPGRVPALV---LRCRVAGVRFMAPDPTDEYFAKIRLVPVRANEQGYA-----GD
LOC_Os06g48950.1|11680.m04850/1-1116         ---ADPTEDEYVAQMTLQP-VTSYKGEA-----LQ
LOC_Os08g40900.1|11674.m04106_atsplice/1-1056 ---DADAQIPSPYPNLPSKLI---ICILHSVTMLADPDTDEYVARMTLQPVNSCDKET-----LL
LOC_Os11g32110.1|11687.m02952/1-812          ---VEASTN---QVGEQRMQLYNLVWKI---LCEVMNVELKAEPTDEYVAQITLQLP-ESKQEQDN-----GS
LOC_Os12g41950.1|11686.m04180/1-900          ---VAASTNK---EVDAQIPNYPNLPPQL---ICQLHNVTHMADAETDEYVAQMTLQP-LSPEEQK-----
LOC_Os12g29520.1|11686.m02861_atsplice/1-842   ---VEASTNQ---VAEQQAGFLYNLVWKI---PCKVMNVELKAEPTDEYVAQITLQLP-EKQDQDGGNSGNGNVS-KD
LOC_Os04g56850.1|11670.m05610_atsplice/1-956 ---VAATTRK---IPNSRIIPNYPNLPSQL---LCQVHNITLHADKDTDEYVAQMTLQPVNSGTDVGF-----
LOC_Os05g48870.1|11682.m04683_atsplice/1-696   ---LGDAPAAAAAAAAPPVHV---FCRVVDVTLTADAETDEYVAQSLVPEKEEVARR-----AD
LOC_Os01g48060.1|11667.m04657_atsplice/1-723   ---LGAAPGSGPGAAPPVHV---FCRVVDVSLHADAETDEYVAQVSLVDNVEVERRMREG-----DG
LOC_Os01g54990.1|11667.m05421/1-656          ---AGAGGGIRGEVAVALPPHV---ACRVVDVLELC-----VFERNLHGG-----GI
LOC_Os10g33940.1|11676.m02996/1-699          ---ADGGGAAAAAAALGPRALPPLV---LRCRVGQVFLADRDSDEYVAKIRLAPVAPGAEAFREP-----DE
LOC_Os02g04810.1|11668.m00419/1-1094         ---DVAHVPSYPNLPSKLI---ICLLHGNLHADPDTDEYVAQMTLQP-VNDYTGKEA-----LQ
LOC_Os04g59430.1|11670.m05892/1-530          ---CPAPLPDPLPSAHRFF---LCTITAVDLADTITGEPYATISLLPLRHDAPA-----PA
LOC_Os07g08520.1|11673.m00789/1-729          ---CAEDPALLSRLPDPHPVPTVADLVLDVDAESGEAYATISLLP-----GS
LOC_Os07g08530.1|11673.m00790/1-408          ---FCQFPAPLLEQLAVPG-PRVF---LCTVAAVRLRADALTNEAYAEITLDP-VADHDV-----PR
ARF1/1-665                                     ---CLSRQPEPLPG-RIF---LCKVTVDRVLGA-AATNEALATISLVP-IAADDHAFQ-----LQ
ARF3/1-608                                     ---LEASMNH---EQMPSFNLPSKII---LCKVINIQRRAEPEDEYVAQITLQLP-ELDQSE-----PT
ARF4/1-788                                     ---APDFSAIYGLPPHV---FCRILDVKLHAETTTDEYVAQVSLPESEDIERKVRREG-----II
ARF5/1-902                                     ---DAMVSYSSPLEIPKFDLNPQI---VCRVNVNQLLANKDTEYVYQVTLQLP-LQEFSMNLNGEGKE-----VK
ARF6/1-933                                     ---VAVSTRR---SATQVPPNYPNLPSQL---MCQVHNVTLHADKDSDEIYAQMSLQPVHSERDV-----FP
ARF7/1-1165                                    ---VAASTNK---EVDAHIPNYPSLHPQL---ICQLHNVTHMADVETDEYVAQMTLQP-LNAQEYK-----
ARF8/1-811                                     ---VAASMNQ---KQDFIPSYPNLPSKLI---ICMLHNVTLNADPETDEYVAQMTLQP-VNKYDRDA-----LL
ARF9/1-638                                     ---VAATTNK---EVDGHIIPNYPSLPPQL---ICQLHNVTHMADVETDEYVAQMTLQP-LTPEEQK-----
ARF10/1-693                                    ---LEASTQQ---VDLNTMKPLFYLPPKI---LCNVNMVSLQAEKDTDEYVAQITLQIPVGTVEK-----PM
ARF11/1-601                                    ---AHAPPDFHAPRVPLI---LRCRVVSKFLADAETDEYFAKITLQLP-LPGNDLDELND-----AV
ARF12/1-593                                    ---LVASTNQ---GVVDQEIPVFNLPKII---LRCRVSLTLKAEHETDEYVAQITLQP-EEDQSE-----PT
ARF13/1-623                                    ---VETSTR---EELNELQPICDLPSKLI---QCRVIAIHLKVENNSDETYAEITLMP-----D
ARF14/1-605                                    ---IENSTR---DELDHIRPFDLPSKLI---RCRVVAIDRKYVDKNTDEYVAQISLMP-----D
ARF15/1-598                                    ---VEASTR---EELNELQPICDFPSKLI---QCRVIAIHLKVENNSDETYAEITLMP-----D
ARF16/1-670                                    ---VEASTR---EELNELQPICDFPSKLI---QCRVIAIHLKVENNSDETYAEITLMP-DTTVSYEN-----
ARF17/1-585                                    ---AYDCVDFGNLPIPPMV---LRCRVLAIKYMAEAESDEYFAKIRLIP-LKDEYV-----DH
ARF18/1-602                                    ---CCPLLSTLPSSTSPV---PCIITSIQLLADPVTDEYFAHLIQLP-MTQQFT-----PT
ARF19/1-1086                                   ---LVASTNQ---GINSEIIPVFDLPPKI---LRCRVDTLTKAEHETDEYVAQITLQP-EEDQSE-----PT
ARF20/1-615                                    ---VAASMNQ---KQDFIPNYPNLPSKLI---ICLLHNVTLHADTETDEYVAQMTLQP-VNSQYDREA-----LL
ARF21/1-606                                    ---VDASTR---EELNELQPICDLPSKLI---QCRVIAIHLKVENNSDETYAEITLMP-----D
ARF22/1-600                                    ---VEASTR---EELNELQPICDLPSKLI---QCRVIAIHLKVENNSDETYAEITLMP-----D
ARF23/1-222                                    ---VEASTR---EELNELQPICDLPSKLI---QCRVIAIHLKVENNSDETYAEITLMP-----D
ARF2/1-859                                    ---VEASTN---QAAEQMPLYDLPSKLI---LRCRVINVDLKAEADTDEYVAQITLQP-EANQDEN-----AI
PoptrARF8.1/1-827                              ---VAATTNK---EVDAHIPNYPSLPPQL---ICQLHNVTHMADVETDEYVAQMTLQP-LTPEEQK-----
PoptrARF1.1/1-660                              ---LEASMNH---QGMQMPFNLPSKII---LCKVNVNQRRAEPEDEYVAQITLQLP-EPDQSE-----VT
PoptrARF7.3/1-1113                             ---VAASLKK---DVNAQIPNYPNLPSKLI---LCLLHNVTLHADPTEDEYVQMTLQP-VSSFDKDA-----LL
PoptrARF2.3/1-792                              ---VEASTNQ---VADDQMPAYNLPPKI---LRCRVNVNQLKAEKDTDEYFAQVILLP-LKDEYV-----LV
PoptrARF5.1/1-933                              ---VAVSTRK---SATSQIPNYPNLPSQL---LCQVHNVTLHADKDTDEIHAQMSLQPVNSEKDV-----FP
PoptrARF5.2/1-944                              ---VAVSTRR---SATSQIPNYPNLPSQL---LCQVHNVTLHADKDTDEIYAQMSLQPVNTEKDV-----FP
PoptrARF7.4/1-1137                             ---VAASMKK---DVDAQIPNYPNLPSKLI---LCLLHNVTLHADPTEDEYVAQMTLQP-VSSFDKDA-----LL
PoptrARF16.1/1-669                             ---AQGSVDFGHFIIPALII---PCKVSAIKYMAADPETDEYVAKIRLIP-LNNSDLMLGH-----GC
PoptrARF1.2/1-662                              ---LEASMNH---QGMQMPFLNLPSKII---LCKVNVNQRRAEPEDEYVAQITLQLP-EPDQSE-----VT
PoptrARF9.1/1-666                              ---LEASTN---QELNQRVPLFNLPSKII---LRCRVINTQLLAEQDTEYVAQITLQLP-ESDQIE-----TT
PoptrARF2.1/1-854                              ---VEASTN---QVADQMPLYDLPPKI---LRCRVNVNQLKAEPTDEYFAQVTLQLP-LHNQDEN-----AS
PoptrARF16.3/1-700                             ---ACEPVDFRNLPGASHT---LRCRVSAIKFMAPDETDEYFAKIRLVP-INSNEIDL-----DD
PoptrARF3.1/1-709                              ---LPDLPLGIYDLPPHV---FCRVVDVKLHAAEASDDVYAQVSLVPESEIEIQLKREG-----VF
PoptrARF6.2/1-914                              ---VAASTNK---EVDARIPNYPSLPPQL---ICQLHNVTHMADVETDEYVAQITLQP-LSPEEQK-----
PoptrARF6.4/1-953                              ---VAASTNK---EVDAHIPNYPSLPAQL---ICQLHNVTHMADVETDEYVAQMTLQP-LSPEDKK-----
PoptrARF17.1/1-594                             ---PCQISAVDFLADPVTDEYVTRLLIPLDNPFNSNPLSFL-----EP
PoptrARF2.4/1-879                              ---VRFHLLPSPVEASTNQ-VADDQMPAYNLSPKI---LRCRVNVNQLKAEKDTDEYFAQVILLP-ETQQDVE-----LV
PoptrARF16.2/1-708                             ---AQGSVDFGHFIIPALII---PCKVSAIKYMAEPEDEYVAKIRLTP-SNSDLMFGD-----GC
PoptrARF2.2/1-852                              ---VEASTN---QVADQMPLYNLPKI---LRCRVNVNQLKAEPTDEYFAQVTLQLP-EHNDQES-----VL
PoptrARF10.1/1-708                             ---SQSPVDFPQ-RIPSLV---LRCRVASVKFLADPDTDEYFAKISLVP-LPDADLD-----IS
PoptrARF3.3/1-109                              ---LEASTN---QELNQRVPLFNLPSKII---LRCRVINTQLLAEQDTEYVAQITLIP-ESDQIE-----PT
PoptrARF9.2/1-670                              ---VAASTNK---EVNAQIPSYPSLPAQL---ICQLHNVTHMADVETDEYVAQMTLQP-LSPEEQK-----
PoptrARF6.1/1-884                              ---LASSS---PFSHRDMPNFDLHPQI---FCKVNVNQLLANRENDEYVTRLLPQPEVVGQDLEGKE-----LQ
PoptrARF6.3/1-163                              ---LPDLPLAVYDLPSHV---FCRVVDVKLHAAEASDEYVAQVSLVPESEIEIQLKREG-----IF
PoptrARF3.2/1-714                              ---LEASTN---QELNQIIPRFNLPPKI---LRCRVNIIQLLAEQDTEYVAQITLHP-EVDQTE-----PT
PoptrARF9.3/1-579                              ---VAASTNK---EVDARIPNYPSLPPQL---ICQLHNVTHMADVETDEYVAQMTLQP-LSQDDQK-----
PoptrARF6.5/1-907                              ---LEASTN---QELNQIIPRFNLPPKI---LRCRVNIIQLLAEQDTEYVAQITLHP-EVDP-----
PoptrARF9.4/1-632                              ---VAASMNQ---KETDFVPSYPNLTSKLI---ICMLHNVTLHADVETDEYVAQMTLQP-VSKYDKEA-----LL
PoptrARF7.1/1-1047                             ---VAASMNQ---KETDFIPSYPNLPSKLI---ICMLHNVTLHADVETDEYVAQMTLQP-VSKYKEA-----LL
PoptrARF7.2/1-1093                             ---VAATTNK---EVDAHIPNYPSLPPQL---ICQLHNVTHMADVETDEYVAQMTLQP-LTPEEQK-----
PoptrARF8.2/1-816                              ---ACEPVDFRNLPRVSHN---LRCRVSDIKFMAPDETDEYFAKIRLVP-INSNELDL-----DD
PoptrARF16.6/1-91                              ---SQSPVNFQ-RIPSLI---LRCRVATVKFLADPDTDEYVAKIFVFP-LPNTDLDF-----AH
PoptrARF10.2/1-713                             ---SSSSTAPHPPLSNLALSKPLI---SCQISAVDFLADPVTDEYVIRLLLLP-LNNSCNPLSFL-----EP
PoptrARF17.2/1-592                             ---VAARMN---EEGKEMPIYDLPYKI---LCKVNVNQLKAEAGTDEYFARITMLP-VAEEDL-----
PoptrARF2.6/1-724                              ---VAAFLN---EDSKTAMPYDLPYKI---LCKVNVNQLKAEAKTDEYFAHITLQP-----VAE

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Consensus





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 LOC\_Os04g43910.1|11670.m04249/1-696  
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 ARF5/1-902  
 ARF6/1-933  
 ARF7/1-1165  
 ARF8/1-811  
 ARF9/1-638  
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 ARF11/1-601  
 ARF12/1-593  
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 ARF14/1-605  
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 ARF16/1-670  
 ARF17/1-585  
 ARF18/1-602  
 ARF19/1-1086  
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 PoptrARF2.6/1-724  
 PoptrARF2.5/1-614

540 550 560 570 580 590 600 610 620 630  
 LL ---- QS - GWSV FVSSKRLVAGDAF I FL R - G - - - - ENGEL RVGVRRA MRQLSNV P S S V I S  
 LL ---- TT - GWS T F V T S K R L I S G D A F Y V L R - S - - - - E T G E Q R V G V R R L V Q K Q S T M P A S V I S  
 LL ---- TT - GWS V F V S A K R L V A G D S V L F I W - N - - - - D S N Q L L L G I R R A N R P Q T V M P S S V L S  
 LL ---- TT - GWS V F V S S K R L V A G D A F I F L R - G - - - - ENGEL RVGVR R R L M R Q L N N M P S S V I S  
 LL ---- TT - GWS T F V N Q K L L V A G D S I V F L R - G - - - - D G G L H V G I R R A K R G F C G G G G A E E A S L - - - - P G W D Q Y G G L M R G N A S P C A A A K G  
 LL ---- TT - GWS V F V S A K R L V A G D S V L F I W - N - - - - E K N Q L L L G I R R A S R P Q T V M P S S V L S  
 LL ---- TT - GWS P F V N K K L A G D S I V F M R - D - - - - E G G I H V G L R R A K R G F C S I G G D D E S L S S I P G W D Q Y R G L M R R N A T A T A T G G R T P P  
 VM ---- TK - GWS R F V K E K R L D A G D T V S F C R G A - - - - -  
 LL ---- TT - GWS V F V S S K R L V A G D A F I F L R - G - - - - E S G E L R V G V R R L M R Q V N N M P S S V I S  
 LL ---- T I - GWS S F V N R K K L V S G D A V L F L R - G - - - - D D G Q L R L G V R R A V Q L R N E A L F E P V N  
 LL ---- TT - GWS V F V S T K R L L A G D S V L F I R - D - - - - E K S Q L L L G I R R A T R P Q P A L S S S V L S  
 LL ---- TT - GWS V F V S A K R L V A G D S V L F I W - N - - - - D N N Q L L L G I R R A N R P Q T V M P S S V L S  
 LL ---- TT - GWS T F V N Q K L L A G D S I V F M R - D - - - - E N G D L C V G I R R A K K G V G G P E F L P P P P P P P T P A A G G N Y G G F S M F L R G D D D G N K M A A A A R K V  
 LL ---- TT - GWS L F V S G K R L F A G D S V I F V R - D - - - - E K Q Q L L L G I R R A N R O P T N I S S S V L S  
 LL ---- TT - GWS L F V S G K R L L A G D S V L F I R - D - - - - A K Q Q L L L G I R R A N R O P T N L S S S V L S  
 LL ---- QS - GWS V F V S A K R L V A G D A F I F L R - G - - - - ENGEL RVGVRRA MRQQT N V P S S V I S  
 LL ---- TT - GWS V F V S A K R L V A G D S V I F I W - N - - - - D N N Q L L L G I R R A N R O Q T V M P S S V L S  
 LL ---- QS - GWS V F V S A K R L V A G D A F I F L R - G - - - - ENGEL RVGVRRA MRQQAN I P S S V I S  
 LL ---- TT - GWS L F V S G K R L A G D S V L F I R - D - - - - E K S Q L L L G V R R A T R O Q T M L S S S V L S  
 LL ---- TT - GWS A F V N K K L V S G D A V L F L R - G - - - - D D G E L R L G V R R A A Q L K N G S A F P A L Y  
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 LL ---- TT - GWS S F V N K K L V S G D A V L F L R - G - - - - D D G E L R L G V R R A T Q L K N E A I F K A F S  
 LL ---- TT - GWS T F V N Q K L L A G D S I V F L R - T - - - - R H G E L C V G I R R A K R M A C G G M E C M S G W N A P Y G G G G F S A L F K E E S K L M K G H G G G G Y M K G  
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 LL ---- TT - GWS K F V N A K L A G D T V V F M W C G - - A P A P E R K L L V G V R R A A R Y S G E S A C N A  
 M L G D L G V N D N D G W R G F V K A R R L A T R O T V V F M R R G G G D G D G D G E L L V G V R R A P R A R G H H P R  
 T L ---- AK - V W K F R D D M D F V D G D S V I F M R - R R D D D D D G E L Y V G V R R Q T L E R L R N T M R R Y R P P T P  
 M F ---- RN - G W M E F S N A N G L V T G D N A V F M R - R - - - - G N G E M F M A V R R T R N R  
 LL ---- TT - GWS V F V S S K L L V A G D A F I F L R - G - - - - E N E L R V G V R R H M R Q Q T N I P S S V I S  
 LL ---- TT - GWS A F V N K K L V S G D A V L F L R - G - - - - D D G K L R L G V R R A S Q I E G T A A L S A Q Y  
 LL ---- TT - GWS I F V S Q K N L V S G D A V L F L R - D - - - - E G G E L R L G I R R A A R P R N G L P D S I  
 LL ---- TT - GWS L F V S G K R L R A G D S V L F I R - D - - - - E K S Q L M V G V R R A N R O Q T A L P S S V L S  
 LL ---- TT - GWS V F V S A K R L V A G D S V L F I W - N - - - - D K N Q L L L G I R R A N R P Q T V M P S S V L S  
 LL ---- TT - GWS V F V S T K R L F A G D S V L F I R - D - - - - G K A Q L L L G I R R A N R O Q P A L S S S V I S  
 LL ---- TT - GWS V F V S A K R L V A G D S V I F I R - N - - - - E K N Q L F L G I R H A T R P Q T I P V S S V L S  
 LL ---- TT - GWS T F V T S K R L V A G D T F V L R - G - - - - E N G E L R V G V R R A N L Q Q S M P S S V I S  
 LL ---- TT - GWS T F V N Q K L L A G D S I V F L R - S - - - - E S G D L C V G I R R A K R G G L G N A G S D N P Y P G F S G F L R D D E S T T T S K L M M M K R N G N D N D G N A A A  
 LL ---- TT - GWS T F V T S K R L V A G D A F V L R - G - - - - E T G D L R V G V R R A K Q Q S T M P A S V I S  
 LL ---- TT - G W N A F T T S K K L V A G D V I V F V R - G - - - - E T G E L R V G I R R A R H Q Q G N I P S S I V S  
 M F ---- T S G G G W S V F A T T K R L I V G D I F V L L R - G - - - - E N G E L R F G I R R A K H Q Q G H I P S S V I S  
 LL ---- TT - G W N A F T T S K K L V E G D V I V F V R - G - - - - E T G E L R V G I R R A G H Q Q G N I P S S I V S  
 LL ---- TT - G W N E F T T S K K L V K G D V I V F V R - G - - - - E T G E L R V G I R R A R H Q Q G N I P S S I V S  
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 LL ---- TT - G W S K F V N K K L I A G D S V V F M R - K - - - - S A D E M F I G V R R T P I S S S D G G S Y Y G G D E Y N G Y S Q S S V A K E D D G S P K K T F R R S G  
 LL ---- TT - G W S T F V S S K R L V A G D A F V L R - G - - - - E N G D L R V G V R R L A R H Q S T M P T S V I S  
 LL ---- TT - GWS V F V S T K R L F A G D S V L F V R - D - - - - E K S Q L M L G I R R A N R O T P T L S S S V I S  
 S L ---- TT - G W N E F T T S K K L V K G D V I V F V R - G - - - - E T G E L R V G I R R A R H Q Q G N I P S S I V S  
 S L ---- TT - G W N E F I T S K K L V K G D V I V F V R - G - - - - E T G E L R V G I R R A R H Q Q G N I P S S I V S  
 LL ---- TT - G W N A F T T S K K L V A G D V I V F V R - G - - - - E T G E L R V G I R R A G H Q Q G N I P S S I S  
 ---- TT - G W N A F T T S K K L V V G D V I V F A R - G - - - - E T G E L R V G I R  
 LL ---- QS - GWS V F V S S K R L V A G D A F I F L R - G - - - - ENGEL RVGVRRA MRQQGNV P S S V I S  
 LL ---- TT - GWS V F V S A K R L V A G D S V L F I W - N - - - - E K N Q L L L G I R R A T R P Q T V M P S S V L S  
 LL ---- TT - GWS V F V S S K L L V A G D A F I F L R - G - - - - ENGEL RVGVR R L M R Q Q T N M P S S V I S  
 LL ---- TT - GWS L F V S G K R L F A G D S V L F M R - D - - - - E K Q Q L L L G I R R A N R O P T N L S S S V L S  
 LL ---- QS - GWS L F V S A K K L V A G D A F I F L R - G - - - - E T E E L R V G V R R A L S O P S N V P S S V M S  
 LL ---- TT - GWS L F V S G K R L A G D S V L F I R - N - - - - E K S H L M V G V R H A N R O Q T T L P S S V L S  
 LL ---- TT - GWS L F V S G K R L A G D S V L F I R - D - - - - E K S Q L M V G V R R A N R O Q T T L P S S V L S  
 LL ---- TT - GWS L F V S G K R L F A G D S V L F I R - D - - - - E K Q Q L L L G I R R A N R O P T N L S S S V L S  
 LL ---- TT - GWS N F V N Q K L L A G D S I V F L R - A - - - - E N G D L C V G I R R A K R G I G G N E C S S G W M S F A G Y S G F F R E D E S K L M R R N G N G D M  
 LL ---- TT - GWS V F V S S K L L V A G D A F I F L R - G - - - - ENGEL RVGVR R L M R Q Q T N M P S S V I S  
 LL ---- TT - GWS T F V T S K R L V A G D S F V L R - G - - - - ENGEL RVGVR R A R Q Q S S M P S S V I S  
 LL ---- QS - GWS V F V S S K R L V A G D A F I F L R - G - - - - ENGEL RVGVRRA MRQQSNV P S S V I S  
 LL ---- TT - GWS P F V N H K K L V A G D S V V F L R - A - - - - E N G D L C V G V R R A K R A I S G G P E S L W N P A L G N L V V P Y G G F A F S R E D E H K M V K N G R G N G S K S N E S L M  
 LL ---- TT - GWS A F V N K K L V S G D A V L F L R - G - - - - E D G E L R L G V R R A A Q V K C G P T F P A L W  
 LL ---- TT - GWS V F V S A K R L I A G D S V L F I W - N - - - - E K N Q L L L G I R A T R P Q T V M P S S V L S  
 LL ---- TT - GWS V F V S A K R L V A G D S V L F I W - N - - - - E K N Q L L L G I R R A N R P Q T V M P S S V L S  
 LL ---- TT - GWS K F V N K K L I A G D S V V F M R - N - - - - L K G E M F I G V R R A V R F N N S A R W R E Q V S D S G G D K V K V E E G F S R S W  
 LL ---- QS - GWS L F V S A K K L V A G D A F I F L R - G - - - - E T E E L R V G V R R A L R O P S K I P S S L S  
 LL ---- TT - GWS N F V N Q K L L A G D S I V F L R - A - - - - E N G D L C V G I R R A K R G I G G N E C S S G W M S F G G Y S G F L R E D E S K L T R R N G N G D M  
 LL ---- QS - GWS V F V S S K R L V A G D A F I F L R - G - - - - ENGEL RVGVRRA MRQQGNV P S S V I S  
 LL ---- TT - GWS T F V N Q K L L A G D S I V F L R - A - - - - E N G D L C V G I R R A K R G V G I G S G P E S S P S H I G W N N A T S A N P Y G G F S L S V K E D E M R N G G V K G  
 ---- T E ---- H V G V V Y N F L P - C  
 LL ---- TT - GWS T F V T S K R L V A G D S F V L R - G - - - - ENGEL RVGVR R A C Q Q S S M P S S V I S  
 LL ---- TT - GWS V F V S T K R L F A G D S V L F I R - D - - - - E K S Q L L L G I R R A N R O Q P A L S S S V I S  
 LL ---- TT - GWS V F V S A K R L V A G D S V L F I W - N - - - - E K N Q L L L G I R R A T R P Q T V M P S S V L S  
 ---- T E ---- H V G V V Y N F L P - C  
 LL ---- TT - GWS A F V N K K L V S G D A V L F L R - G - - - - E D G E L R L G V R R A A Q V K C G P T F P A Q W  
 LL ---- TT - GWS T F V T S K R L V A G D A F V L R - G - - - - H N R E L R V G V R R L A R Q Q S S I P S S V I S  
 LL ---- TT - GWS V F V S A K R L V A G D S V L F I W - N - - - - E K N Q L L L G I R R A N R P Q T F M P S S V L S  
 LL ---- TT - GWS T F V T S K R L V A G D S F V L R - G - - - - D N G E L R V G L R R A R Q Q C S I P S S V I S  
 LL ---- TT - GWS V F V S T K R I F T G D S V L F I R - D - - - - E K S Q L L L G I R H A N R O Q P A L S S S I S  
 LL ---- TT - GWS V F V S T K R L F A G D S V L F I R - D - - - - E K S Q L L L G I R R A N R O Q P A L S S S V I S  
 LL ---- TT - GWS V F V S A K R L V A G D S V L F I W - N - - - - E K N Q L L L G I R R A T R P Q T V M P S S V L S  
 LL ---- N T - GWS N F V N K K N S W L G T R L C F  
 LL ---- TT - GWS P F V N K K L I A G D S V V F F R - A - - - - E N G D L C V G V R R A K R T S G G P E S L W N P A G G S A V P S G G F A F L R E D E H K L M R S A S G N G N G S K S N E S L M  
 LL ---- TT - GWS P F V N K K L I A G D S V V F F R - A - - - - E N G D L C V G V R R A K R T S G G P E S L W N P A G G S A V P S G G F A F L R E D E H K L M R S A S G N G N G S K S N E S L M  
 LL ---- TT - GWS T F V N Q K L L A G D S I V F L R - A - - - - E N G D L R V G I R R S K R G I G I G S R P E S S L T T G W M S N N A T C A I P Y D G F S L F V K E D E M R N G G M K G  
 LL ---- TT - GWS K F V N K K L I A G D S V V F M R - N - - - - L K G E M F I G V R R A V R L N N S A R W R E Q I A G G G G E G K V K V E E G F M S G  
 L I ---- T S - GWS T F V S S K R L V A G D S F I F L R - G - - - - E S G E L R V G V R R A M K L E N N L S A N I L S  
 LL ---- T G - GWS T F I S S R V V A G D S F I F L R - G - - - - E S G E L R V G V R R A M K L E N N L S A N V T

Consensus



LL ---- TT - GWSV FVSSKRLVAGDSVFLR - G - D - DENGEL RVGVRRA NRQQT NMPSSV I SPS + GGG + PGGGGA + L + ES + HK + GRN + SGNGNGSKSNESLM

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 -SQSMHLGVLATAASHAVTSTLFLVYKPK-----R-T-----NQYIIISLNKYLEAVKN-----GFVGMRFKMR-FEGEDTPERR-----  
 -SDSMHIGLAAAAHAANNSPFTIFYNP-----S-ASP-SEFVIIPFSKYNKAMYT-----QGLGMRFKMM-FETEESGVR-----  
 -SDSMHIGLAAAAHAANNSPFTIFYNP-----R-ASP-SEFVIIPFSKYNKALYT-----QVSLGMRFKMM-FETEESGVR-----  
 -SDSMHIGLAAAAHAATNSCFTVYKPK-----RWAAP-SEFVIPLSKYKAVYHT-----RISVGMRFKML-FETEESVRR-----  
 -SEQII-----GTFVLEFDVLRGLA-----  
 -GQGVRAESVIAQVTLAANGLPFEVYKPK-----R-ANT-PEFCVKASLVKTVMQI-----RWCSGMRFKMA-FETEDSSRISW-----  
 -GQGVRAESVIAQVTLAANGLPFEVYKPK-----R-ANT-PEFCVKASLVKTVMQI-----RWCSGMRFKMA-FETEDSSRISW-----  
 -RGRVKEEVL EAGLAANGKPFQVYKPK-----R-SST-PEFCVKASSVRAAMRI-----GWCSGMRFKMA-FETEDSSRISW-----  
 -RGRLSQEAUVVEAERAAKGLPFEVYKPK-----R-AGW-SDFVVRAEAVVAAALRV-----FVWAGMRFKMA-METEDSSRITW-----  
 -SHSMQLGLSSASHAISTGSIPTVYKPK-----W-TSP-AEFIIIPYDQYMESVKI-----WTSAGTRFKMR-FEGEECAEQR-----  
 -AHSMLQLGLSSASHAISTGSIPTVYKPK-----W-TSP-AEFIIIPYDQYMESVKI-----EYSIGTRFKMR-FEGEECAEQR-----

Consensus





	850	860	870	880	890	900	910	920	930	940	950
LOC_Os01g70270.1 11667.m07038_altsplice/1-809				- PLPLSRVKRPR		- PNAPPASPES		- P I			- L TKEAA
LOC_Os01g13520.1 11667.m01333/1-700				- LQSATKNKRPR		- EPSE		- T			- I DLQSL
LOC_Os02g06910.1 11668.m00642/1-909				- SPFPLRLKRPW		- PTGLPS					- L YGGKE
LOC_Os02g35140.1 11668.m03331/1-757				- PQQPARNKRAR		- PPAS		- N			- S I AP E L
LOC_Os02g41800.1 11668.m03990/1-784				- SPPRKKPRILA		- YPEF		- P			- F EQGLL
LOC_Os04g57610.1 11670.m05695/1-819				- SLFPLRVKHPW		- YSGVASLHDD		- SNALMW			- L RGVAGEGGFQ
LOC_Os04g43910.1 11670.m04249/1-696				- SPPRKKPRNPP		- YAEL		- P			- L EQGIF
LOC_Os04g49230.1 11670.m04840/1-294											
LOC_Os04g36060.1 11670.m03490/1-1674				- PPLRNKRARPASPSVVAEL		- PPSF DVSDQI		- SQPSNGNKSDAPGTSSERSPLESQRQVRSCTKV			- I MQGMAVGRAVD
LOC_Os05g43920.1 11682.m04181/1-700				- SSGSKRTKLHF		- PQGSLDTP					- F L N G N G
LOC_Os06g09660.1 11680.m00929/1-1056	DDENEVESAFKRAMPWLADDFALKDVQ			- SALLPGLSLVQ		- WMAQQNPQMLTAASQT		- VQSPYL			- N S N A L A
LOC_Os06g46410.1 11680.m04579/1-918				- SPFPLRLKRPW		- PTGL		- PS			- L HGGKD
LOC_Os06g47150.1 11680.m04656/1-731				- SPPRKKLCVPL		- YPEL		- P			- I DGQFP
LOC_Os06g48950.1 11680.m04850/1-1116	DESSEMENLLKRAMPWLGEEICIKDPQTQNTIMPGLSLVQ					- WMNMQQSS		- S			- FANTAM
LOC_Os08g40900.1 11674.m04106_altsplice/1-1056	DDETEMDGLLKRAMPWLGEEICKKDLNIQNSVVPGLNLAQ					- WMNMQHS		- SS			- L P G T V V
LOC_Os11g32110.1 11687.m02952/1-812				- PLPVPRTKRLR		- PNATALPADS		- SA			- I A K E A R
LOC_Os12g41950.1 11686.m04180/1-900				- SAFPLRLKRPW		- ASGLPMHGMFNGGGNDDFARYSSL		- MW			- L R D G N R
LOC_Os12g29520.1 11686.m02861_altsplice/1-842				- PLPAPRTKRAR		- PNVLASSPDL		- SA			- V N K E V A
LOC_Os04g56850.1 11670.m05610_altsplice/1-956				- TLNSKROCLPG		- YGVSPGMEIGSANMSPFRAQG					- N P Y S L V
LOC_Os05g48870.1 11682.m04683_altsplice/1-696				- TPHSKRLKPCL		- PHVNP EY M					- V P R G G G
LOC_Os01g48060.1 11667.m04657_altsplice/1-723				- TPHSKRLKSCF		- PQVNPDI V					- L P N G S V
LOC_Os01g54990.1 11667.m05421/1-656				- ASSSKRTKLCF		- QGNLDV P					- A L Y G N G
LOC_Os10g33940.1 11676.m02996/1-699				- SPPRKKLRVP		- HPDFP					- F E G H L L
LOC_Os02g04810.1 11668.m00419/1-1094	DDSESEMENL FKRAMPWLGEEVCIKDTQONQNTAPGLSLVQ					- WMNMQQSS		- S			- L AN T A A
LOC_Os04g59430.1 11670.m05892/1-530				- PPLPMLKISN							
LOC_Os07g08520.1 11673.m00789/1-729				- TPQVQIMALPR				- P			- P P P T T T
LOC_Os07g08530.1 11673.m00790/1-408				- T P P P K R L K N C E							
LOC_Os07g08600.1 11673.m00797/1-525											
ARF1/1-665				- PQQPQRNKPR		- PPGL		- P			- S P A T G P
ARF3/1-608				- SFVTTGPKRSR		- IGFSSGK PDI		- P			- V S E G I R
ARF4/1-788				- IQSSPRPKRPW		- AGLD L T T P P G		- NP			- I T K R G G
ARF5/1-902				- T S G L K R Q L H P S		- Y F A G E T E W G S L I K R P L I		- R V P D			- S A N G I M
ARF6/1-933				- SPFPLRLKRPW		- P P G L P S F H G L K E D D M G M S S P L					- M W D R L
ARF7/1-1165	DDETDMESALKRAMPWLDNSLEMKDPS			- STIFPGLSLVQ		- WMNMQQNG		- Q			- L P S A A A
ARF8/1-811				- SLFPLRLKRPW		- HAGTSSLLPDG		- RGDLGSGLTW			- L R G G G G
ARF9/1-638				- KSVMLKNKRPR		- QVSEVSA					- L D V G I T
ARF10/1-693				- FSPRKKIRIPQ		- PFEF		- P			- F H G T K
ARF11/1-601				- TQQQSKRSR				- P			- I S E I T G
ARF12/1-593				- RSFLLNKRLR				- EV			- N E I G S S
ARF13/1-623				- QSSLKKKHH		- WLQL					- N E I G A T
ARF14/1-605				- RSSFLKNKRSR				- EV			- N E I G S S
ARF15/1-598				- RSSFLKNKRLR				- EV			- N E F G S S
ARF16/1-670				- SPPRKKMLPQ		- HPDYNN					- L I N S I P
ARF17/1-585				- FPPAKRLKYPQ		- PGGG		- F			- L S G D D G
ARF18/1-602				- QQQSKCKRSR				- P			- I E P S V K
ARF19/1-1086	DDLEDMENAFKRAMPWLGDEF G M K D A Q			- SSMFPGLSLVQ		- WMSMQQN		- NP			- L S G S A T
ARF20/1-615				- RSSLLKNKRLR				- ET			- L E Y L L N
ARF21/1-606				- RSSLLKNKRLR				- EV			- N E F G S S
ARF22/1-600				- RPSLLKNKRLR				- EV			- N E I G S S
ARF23/1-222											
ARF2/1-859				- PVPMPRPKRPR		- SNIAPSSPDS		- SM			- L T R E G T
PoptrARF8.1/1-827				- SLFPLRLKRPW		- HPGSPSL L D E		- ASNGLMW			- L R G G S G
PoptrARF1.1/1-660				- SQPMQRNKPR		- PSVLP		- SP			- T A N L S A
PoptrARF7.3/1-1113	DDSTDFDSL F K R T M P W L G D D I Y M K D			- PQVLPGLSLAQ		- RMNMQQNP SL ANSMQPNYMQSLSGSVLQN					- L P G G D L
PoptrARF2.3/1-792				- QSKRHRSNMAT				- SS			- A D S S A P
PoptrARF5.1/1-933				- PSLTSGLKRPLQSGFLGDT EWGGLVKKPLA				- W			- L L P G S G
PoptrARF5.2/1-944				- PSLTSGLKRPLQSGFLG D S E W G S L V K K P L S							- L P G S G N
PoptrARF7.4/1-1137	DDSSDFDSL F K R T M P W L G D E F C M K D			- PQALPGLSLVQ		- WMNMQQNP SL ANSMQPNYMQSLSGSVLQN					- L P G A D L
PoptrARF16.1/1-669				- SPPRKKLRPQ		- PPDF		- P			- L L G Q I P
PoptrARF1.2/1-662				- SQPVQRNKRAR		- PYVIP		- SP			- T A D L S A
PoptrARF9.1/1-666				- QPVQPKNKPR				- PP			- I E I P A F
PoptrARF2.1/1-854				- PLPMPRPKRPR		- ANMVPSSPDS		- SV			- L T R E G S
PoptrARF16.3/1-700				- SPPRKKLRPQ		- HPDF		- P			- I D G Q F P
PoptrARF3.1/1-709				- NSMAPGLKRSR		- SGLPSLKA EF		- P			- I P D G I G
PoptrARF6.2/1-914				- STFPLRLKRPW		- TPGLHSFHGKLLYTLRLALMDGI					- K D D D L G
PoptrARF6.4/1-953				- SAFPMRLKRPW		- PSGLPSFHGLKDDDLINSNPMW					- L Q G G V G D L G V H
PoptrARF17.1/1-594				- SPPMKKLRYPN							
PoptrARF2.4/1-879				- SGCRLLKRHRPN		- TVTS		- SA			- D S S A L T
PoptrARF16.2/1-708				- SPPRKKLRPQ		- PPDF		- P			- L L G Q I P
PoptrARF2.2/1-852				- PLPLPRPKRPR		- ANMVPSSPDS		- SV			- L T R D G S
PoptrARF10.1/1-708				- SPPRKKLRFPQ		- QLDFP					- L D G Q F Q
PoptrARF3.3/1-109											
PoptrARF9.2/1-670				- TASTRNSGLTQ		- SHDL		- TQ			- L S V T G E
PoptrARF6.1/1-884				- SPFPLRLKRPW		- P P G L P S F H G L		- GI			- K D D D L G
PoptrARF4/1-713				- IQSSPRLKCLR		- TGLQAAPPDK		- P			- I A G G G G
PoptrARF6.3/1-163											
PoptrARF3.2/1-714				- NFMAPGLKRSR		- SGLPSSKA EF		- P			- I P D G I G
PoptrARF9.3/1-579				- TQQVMKTKRPR		- PTDI					
PoptrARF6.5/1-907				- SAFPMRLKRPW		- PSGLPSFHGLQDGD L N I N S P M W					- L Q G G V G D L G V Q
PoptrARF9.4/1-632				- TQQVVKSKRPR		- SVDI		- P			- T S G S I T
PoptrARF7.1/1-1047	NDESDTENAFKRAVPWL G D E F G K K D A A			- SSIFPGLSLVQ		- WMSMQQNNQF		- QA			- A Q S G I F
PoptrARF7.2/1-1093	DDSD I E N A F K R A M P W L G D E F G M K D P P			- SSIFPGLSLVQ		- WMSMQQNNQF		- PA			- T Q S G L F
PoptrARF8.2/1-816				- SLFPLRLKRPW		- HPGSSLLDS		- RDEASNGLIW			- L R G G S G
PoptrARF16.6/1-91											
PoptrARF16.4/1-701				- SPPRKKLRPQ		- H L D F		- P			- I D G Q F P
PoptrARF16.5/1-536				- SPPRKKLRPQ		- H L D F		- P			- I D G Q F P
PoptrARF10.2/1-713				- SPPRKKSRFPQ		- Q L G F		- P			- L D L Q F Q
PoptrARF17.2/1-592				- FPPMKKLRYPN							
PoptrARF2.6/1-724				- MECIADKSLPR							- F L I S V K
PoptrARF2.5/1-614				- LPTIAHLLSPP		- NPEW		- N			- F S P I G K

## Consensus



	960	970	980	990	1000	1010	1020	1030	1040	1050	
LOC_Os01g07020.1 11667.m07038_atsplice/1-809				TKVDTDPAAQQRSSQNSTV						LQGQEQMTL	
LOC_Os01g13520.1 11667.m01333/1-700				EPAQEFWLSGMPQ						QHEKGTGIGS	
LOC_Os02g06910.1 11668.m00642/1-909				DDLASSLMLRDSQNTGFQSLNFGGLGMSPPMQRPLDSSLGLQPDMYQ							
LOC_Os02g35140.1 11668.m03331/1-757				PPVFGLWKSS						AESTQGFSS	
LOC_Os02g41800.1 11668.m03990/1-784				NPAFPNPALHGHYH						HNHPSFFPF	
LOC_Os04g57610.1 11670.m05695/1-819	SLNFQ			SPGIGSWGQRLHPSSLSSDHDQYQAVVAASQSGYGLKQKFLFL						Q	
LOC_Os04g43910.1 11670.m04249/1-696				TGPVFPNPMAHDDHH						HHGFPLHF	
LOC_Os04g49230.1 11670.m04840/1-294											
LOC_Os04g36060.1 11670.m03490/1-1674				LTKLNGYGLRSKLEEMFDIQGDLCPTRLKRWQVYTDDEDDMLVGGDPWEKQCFFI	TASCAEDATPFCL	ELWVYL	NCKCQEV	PKTGKT	AWKRHS	GKCMFPQIVL	
LOC_Os05g43920.1 11682.m04181/1-700				HPDSMGTEFHRV						LQGEFGRS	
LOC_Os06g09660.1 11680.m00929/1-1056				MQDVMGSSNEDPTKRLNTQAQNMVLPNLQVGSKVDHPVMSQHQQQPH							
LOC_Os06g46410.1 11680.m04579/1-731				DDLTSLLMLRDSANPGFQSLNFGGLGMNPVMQPRFDASLLGLQPDMYQ							
LOC_Os06g47150.1 11680.m04656/1-731				TPMFGHNP						ARGVGPCCY	
LOC_Os06g48950.1 11680.m04850/1-1116				QSEYLRSLSNPNMQLGAADLSRQLCLQNQLQNNIQFNTPKLSQQ							
LOC_Os08g40900.1 11674.m04106_atsplice/1-1056				QPELLNSLSGKPVQNLAAADLSRQISFHPQLQNNIQFNTALVPPQ							
LOC_Os11g32110.1 11687.m02952/1-812				TKVVVESEPNGTQRTFQTQ						ENATPKSGF	
LOC_Os12g41950.1 11686.m04180/1-900				GTQSLNFGHGVSPLQPRIDSPLLGLKPDYQQMAAAALEEIRYGDPSKQHPATLQY							
LOC_Os12g29520.1 11686.m02861_atsplice/1-842				SKVMANSQQNGLPRA						FHSQENML	
LOC_Os04g56850.1 11670.m05610_atsplice/1-956				QHIPAVGSELAIMLLNQSGQLGSPLSFHQSSYSIIQNVKQNYIPLLTVSTSACTKQESLPS							
LOC_Os05g48870.1 11682.m04683_atsplice/1-696				CPDFAESAQFHKV						LQGEQLGF	
LOC_Os01g48060.1 11667.m04657_atsplice/1-723				SSDFAESARFHKV						LQGEQLGL	
LOC_Os01g54990.1 11667.m05421/1-656				RPDSVETEKFRV						LQGEQLMGS	
LOC_Os10g33940.1 11676.m02996/1-699				NPIFHGNPL						GPSNSPLCC	
LOC_Os02g04810.1 11668.m00419/1-1094				QSEYLQALGNPAMQNLAADELARQLYVQNNLLQNNC						IQFNSPKLPQQ	
LOC_Os04g59430.1 11670.m05892/1-530											
LOC_Os07g08520.1 11673.m00789/1-729				TGMVPSDDSYAMISL						FPGDYVTH	
LOC_Os07g08600.1 11673.m00797/1-525											
ARF1/1-665				SGPVTPDGVWVSP						ADTPSSVPL	
ARF3/1-608				ATDFEESLRFQV						LQGEQIFPG	
ARF4/1-788				FLDFEESVRPSKV						LQGEQIGS	
ARF5/1-902				PYASFPSMASEQLMKMMRPHNNQVPSFMSEMQQNI	VMGNGLLGD						
ARF6/1-933				QSLNFQGMGNPVMQPRDLTSGLLGMQNDVYQMAAAALQDMRGI	DPAKAAASLLQF						
ARF7/1-1165				QPGFFPSMLSPTAALHNNLGGTDDPSKLLSFQTPHGGI	SSSNLQFNK						
ARF8/1-811				EQGQLPLNYPVSLFPVMQQLDL	SQMGTDNNQQYQAML	AAGLQNI	GG				
ARF9/1-638				ASNLWSVLTQPH						FAQSCITSQ	
ARF10/1-693				FPIFSPGFAN						NGGGSIMCY	
ARF11/1-601											
ARF12/1-593				SSHLLPPILTQ						GQENEQLSV	
ARF13/1-623				LSNLWTQ						EIQRSMN	
ARF14/1-605				SSHLLPPTLTQ						EIQQSM	
ARF15/1-598				SSHLLPPILTQ						EIQGLSV	
ARF16/1-670				VPSFSPNP						LIRSSPLSS	
ARF17/1-585				EILYPOQGLSSAA						SQDSINASL	
ARF18/1-602				TPAPPSFLYSLPQ							
ARF19/1-1086				PQLPSALSSFNLNNFASNDPSKLLNFQSPNLS	SSANSQFNKPTNVNH						
ARF20/1-615				ILVLYTCSSSH							
ARF21/1-606				SSHLLPPILTQ						EIQGLSV	
ARF22/1-600				SSHLLPPILTQ						EIQGLSV	
ARF23/1-222											
ARF2/1-859				TKANMDPLPASGLSRV						LQGEYSTL	
PoptrARF8.1/1-827				EPGLPSLNFQANMLPVMQQLDPTMLGDNHNQRYQAML	AAGMQLNGS						
PoptrARF1.1/1-660				LGMWKPVSSESAF						SYGESQGR	
PoptrARF7.3/1-1113				SRQLGLSSPQMPQNNLQFNAQRLPQQAQQLDQLPKLQSLNPLGSI	IQSQQQMDG						
PoptrARF2.3/1-792				TKKDNEPSRHLQHEILTLRNTHAGKNYSKHNPAQALFQKGDQAF							
PoptrARF5.1/1-933				NASLPHYASMSNMYSEQLINMLMKPQAVNYPGICGALPEVSAVKVGS							
PoptrARF5.2/1-944				ANLPHYASMSNICESEQLINMLMKPPIINYPGICGALPEVSAKVASL							
PoptrARF7.4/1-1137				SRQLGLSSPQMPQNNVQFNAQRLPQQAQQLDQLPKLQSSL	IPLGSI	MQPQQQMGD					
PoptrARF16.1/1-669				MPSTFGNP						LRNSPLCC	
PoptrARF1.2/1-662				LGMWKPVSSESA						SYGDSQGR	
PoptrARF9.1/1-666				DLSSATSPWNSG						LQSCDLTQ	
PoptrARF2.1/1-854				SKVTADPPSASGFSRV						LRGEFSTL	
PoptrARF16.3/1-700				MPIFSGNL						LQPSPPGF	
PoptrARF3.1/1-709				ASDFRVSSRFQEV						LQGEIMRS	
PoptrARF6.2/1-914				MNSLMLRGDGDRIQLSNLQGMGVA	PVMQPRVDT	SMLGLQNDVYQ					
PoptrARF6.4/1-953	SLNFQ	NFGA	APWI	QPRFEASMPAL	QPDVYQ	MAAALQEMRT	VESSKL	ASQSL	QFQSQNL	STGPAAL	IQ
PoptrARF17.1/1-594				DSGFL						TNGELFFPM	
PoptrARF2.4/1-879				KKDNGPSRHMHQHEILTLRNTPTGKNYSDNNHNPWLS	QKGDQSTF						
PoptrARF16.2/1-708				MPSTFGIP						LRNSPLCC	
PoptrARF2.2/1-852				FKVTADPPSASGFSRV						LQGEFSTL	
PoptrARF10.1/1-708				LPSTFGNP						LGPSSPLCC	
PoptrARF3.3/1-109											
PoptrARF9.2/1-670				GKSYENHVMWHQKQTDV						NGHSNMSR	
PoptrARF6.1/1-884				KNPSLMLRGDGDGYSQSLNFQGTGVPWQPRVDASML	GLQNDVYQ						
PoptrARF4/1-713				FLDFKESVRSKV						LQGEQENVGL	
PoptrARF6.3/1-163											
PoptrARF3.2/1-714				APGFRESRSQEV						LQGEIMSF	
PoptrARF9.3/1-579				PTSAASSFWYHG							
PoptrARF6.5/1-907	SLNFQ	SFGV	APWI	QPRFDTSM	PAALQPEMYQ	MAAALQEMRT	VESSKL	ASQSHL	QFQSQNV	SNGPAAL	IQ
PoptrARF9.4/1-632				EVQSSSHVWSMR							
PoptrARF7.1/1-1047				PPMVPSNDLQKNLSTDDPSKLLNFQAPGLSAPS	IQFNKT	NSENQV	GQ				
PoptrARF7.2/1-1093				PSMPSNALHNNLSTDDPSKVLNFQAPGLSPPSVQL	NKTNPNQNV	GQLPQP	PMAWT	QQQQL	QQL	LQT	
PoptrARF8.2/1-816				EQGLPSLNFQANMLPVMQQLDPTMLGDNHNQRYQAML	AAGMQLNGS						
PoptrARF16.6/1-91											
PoptrARF16.4/1-701				MPIFSGNL						LGPSSSDF	
PoptrARF16.5/1-536				MPIFSGNL						LGPSSSDF	
PoptrARF10.2/1-713				LPSTFGNP						LGPSSMCC	
PoptrARF17.2/1-592				DSRFL						TGELFFPM	
PoptrARF2.6/1-724				EGLHGSDEHANSLELV						LQGEQDRDT	
PoptrARF2.5/1-614				DNQEQVVMHGPVY						PCPSSTVSF	

## Consensus



SLNFQ-SFGVAPWI-QPRFDTSM-PAALQPEMYQ-MAAALQEMRT-VESSKL-ASQSHL-QFQSQNV-SNGPAAL-IQ-EVQSSSHVWSMR-PPMVPSNDLQKNLSTDDPSKLLNFQAPGLSAPS-IQFNKT-NSENQV-GQ-PSMPSNALHNNLSTDDPSKVLNFQAPGLSPPSVQL-NKTNPNQNV-GQLPQP-PMAWT-QQQQL-QQL-LQT

1070 1080 1090 1100 1110 1120 1130 1140 1150 1160

LOC\_Os01g70270.1|11667.m07038\_atsplice/1-809 .....RSNL TESNDSVTAHKPMWSPSPNAAKAHLTFQQRPPMDNWMQLGRRETDFKDVRSQ
LOC\_Os01g13520.1|11667.m01333/1-700 .....SEPNCCI SGHQVWVWPEHPGYGAVSSVVCNPLVLESWLKD
LOC\_Os02g06910.1|11668.m00642/1-909 .....TIAAAAAALQNTTKQVSPAMLFQFQQPNIVGRSSLSSQILQQAQPFQMQMYHQINGNISIQ
LOC\_Os02g35140.1|11668.m03331/1-757 .....SGLQRTQELY
LOC\_Os02g41800.1|11668.m03990/1-784 .....PDVSAPAGIQGARHAQFG
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PoptrARF2.6/1-724 .....
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Consensus



.....DVKNMQ+ + RQF + Q + N + S + N + P A G + Q G A R H A Q F Q Q S Q L + Q Q Q Q Q Q Q Q Q S Q R Q Q + Q Q L Q + Q Q



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## Consensus

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 PoptrARF9.4/1-632  
 PoptrARF7.1/1-1047  
 PoptrARF7.2/1-1093  
 PoptrARF8.2/1-816  
 PoptrARF16.6/1-91  
 PoptrARF16.4/1-701  
 PoptrARF16.5/1-536  
 PoptrARF10.2/1-713  
 PoptrARF17.2/1-592  
 PoptrARF2.6/1-724  
 PoptrARF2.5/1-614

## Consensus



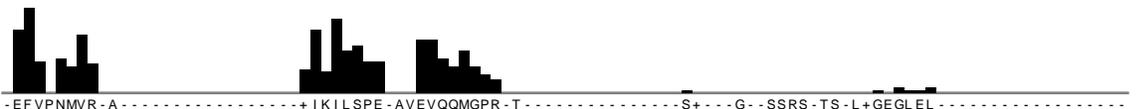






	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900
LOC_Os01g70270.1 11667.m07038_atsplice/1-809	-EFC-SIVR		-K I Y I Y T K E		-E V Q K M N S K					
LOC_Os01g13520.1 11667.m01333/1-700	-EFC-QMVR		-K I V L Y P I E		-D E K K I E P H					
LOC_Os02g06910.1 11668.m00642/1-909	-EFV-NSVS		-C I K I L S P Q		-E V Q Q M G K P					
LOC_Os02g35140.1 11668.m03331/1-757	W L T T L L Q		-C L I L L S R V	-L V N A A L L I L Y I	Q R A V L F N G L C F Q I H W I N A G G F G G W K E G Y S T K R A S G V C R E P					
LOC_Os02g41800.1 11668.m03990/1-784	R D F N K K A Q S A Q V S Y C S P V S F F I I	I N N D Q L R V L V D S			-R V L R C K N P V T T H Q R L E C R G P L A Q G T S A C S M Q T Q R C A I S D L S G L T S R					
LOC_Os04g57610.1 11670.m05695/1-819	-S F V - N S V W		-Y I K I L S P E		-D V H K M G K Q					
LOC_Os04g43910.1 11670.m04249/1-696	-A F V - K S A R		-K L R I L T D A		-G S D N L G D X					
LOC_Os04g49230.1 11670.m04840/1-294	-S T L		-R C T T R A P X							
LOC_Os04g36060.1 11670.m03490/1-1674	G E F V F D Q S W A E A Y Y S Y G L E Y Y P		-K L Q S C V P F T P V T G O R I L V R D T P Y R D Q V F E A L V K E L K S L T T K L K V S S L H I T F P S E G E F S K L K D S E F L Q R I G M Q Y H W R N R							
LOC_Os05g43920.1 11682.m04181/1-700	-L F G H S H S T		-P G A L H A L C		-A A A P L G M X					
LOC_Os06g09660.1 11680.m00929/1-1056	-E F V - G C V K		-S I K I L S A A		-E V Q Q M S L D					
LOC_Os06g46410.1 11680.m04579/1-918	-E F V - N S V S		-C I K I L S P Q		-E V Q Q M G K P			-F E		
LOC_Os06g47150.1 11680.m04656/1-731	-E F T - K T A R		-R L N I L T D T		-S G D N L A S W					
LOC_Os06g48950.1 11680.m04850/1-1116	-E F V - G C V K		-C I R I L S P Q		-E V Q Q M S L E					
LOC_Os08g40900.1 11674.m04106_atsplice/1-1056	-D F V - K C V R		-C I R I L S P Q		-E E M Q M R L V					
LOC_Os11g32110.1 11687.m02952/1-812	-F A - P V Q P		-D G T G Y L S C		-Y L A T X					
LOC_Os12g41950.1 11686.m04180/1-900	-E F A - N S V W		-C I K I L S P Q		-E V Q Q L V R G			G D G L		
LOC_Os12g29520.1 11686.m02861_atsplice/1-842	-E F C - N M V H		-K I F I Y T R E		-E V Q K M N P G				-A L	
LOC_Os04g56850.1 11670.m05610_atsplice/1-956	-E F I - N C V R		-C I R I L S P S		-E V Q Q M S E N					
LOC_Os05g48870.1 11682.m04683_atsplice/1-696	-K S L G N S C A		-T V S V L X							
LOC_Os01g48060.1 11667.m04657_atsplice/1-723	-Y H S		-R L Q S L K P Q		-M P K S L G S S					
LOC_Os01g54990.1 11667.m05421/1-656	-L F G Y N C S T		-P G A L H A L C		-A A P L G I X					
LOC_Os10g33940.1 11676.m02996/1-699	-D F M - K A A R		-R L T I I A G D		-R E R I E R P					
LOC_Os02g04810.1 11668.m00419/1-1094	-D		-S L T N G H N Q		-D G A R L X					
LOC_Os04g59430.1 11670.m05892/1-530	-E A A A A T T S T A H A G		-D A T T S A P S L A L Q L T M A S S							
LOC_Os07g08520.1 11673.m00789/1-729			-R L E A L I P D		-N I X					
LOC_Os07g08530.1 11673.m00790/1-408										
LOC_Os07g08600.1 11673.m00797/1-525	-E V I		-S I E N Y A T S		-I G A X					
ARF1/1-665	-E F C - G M V R		-K I F I Y T P E		-E V K K L S P K					
ARF3/1-608			-C V E G N S M K G A S A V Q S N H H H							
ARF4/1-788	-D F C - N V V W		-K I H L Y T K E		-E V E N A N D D					
ARF5/1-902	-E F V - G C V R		-C I R I L S P T		-E V Q Q M S E E					
ARF6/1-933	-E F V - S S V W		-C I K I L S P Q		-E V Q Q M G K R				-G L E L L N S A P	
ARF7/1-1165	-E F V - N C V Q		-S I K I L S S A		-E V Q Q M S L D					
ARF8/1-811	-S F V - N N V W		-Y I K I L S P E		-D V H Q M G D H					
ARF9/1-638	-E F C - N M V K		-R I F I W S K E		-E V K K M T P G					
ARF10/1-693	-D F M - K A T K		-R L T I K M D I		-G G D N V R K T					
ARF11/1-601	-E F C - K M A K		-K L F I Y P S D		-E V K K M R S K					
ARF12/1-593	-E F C - N M V K		-K I F I Q K R R							
ARF13/1-623	-E F C - N M A K		-R I F I C S K E		-E I K M K L K					
ARF14/1-605	-E F C - N M V K		-K I F I Y S K E		-E V K N L K S R					
ARF15/1-598	-E F C - N M V K		-R I Y I Q K R R							
ARF16/1-670	-E F L - K T A R		-R L T I L T E Q		-G S E S V V V					
ARF17/1-585			-S V P K H S N S		-N A G S S S Q G					
ARF18/1-602	-E F C - K M A K		-K I F I Y S S D		-E V K K M T T K					
ARF19/1-1086	-E F V - N C V Q		-N I K I L S S V		-E V Q Q M S L D					
ARF20/1-615	-E F C - K M V K		-K I L I Y S K E		-E V K N L K S S					
ARF21/1-606	-E F C - K M V K		-K I L I Y S K E		-E V K N L K S S					
ARF22/1-600	-E F C - N M V K		-K I L I F K R G		-G O K L E V Q					
ARF23/1-222										
ARF2/1-859	-E F C - C M V R		-K I F I Y T K E		-E V R K M N P G					
PoptrARF8.1/1-827	-L F V - N N V W		-Y I K I L S P E		-D V L K L G E Q					
PoptrARF1.1/1-660	-E F C - S M V K		-K I F I Y A S E		-E V K R L S P K					
PoptrARF7.3/1-1113	-E F V - N C V R		-C I K I L S P Q		-E V Q Q M S L D					
PoptrARF2.3/1-792	-E F C - S M V R		-R I F V F T R E		-E I N R M E P R				-S L N	
PoptrARF5.1/1-933	-E F V - G C V R		-C I R I L S P S		-E V Q Q M S E E					
PoptrARF5.2/1-944	-E F V - G C V R		-C I R I L S P S		-E V Q Q M S E E					
PoptrARF7.4/1-1137	-E F V - N C V R		-C I K I L S P Q		-E V Q Q M S L D					
PoptrARF16.1/1-669	-E F L - K T A R		-R L T I L S D A		-S S D N V G R					
PoptrARF1.2/1-662	-E F C - G M V K		-K I F I Y T S E		-E V K R L S P K					
PoptrARF9.1/1-666	-E F C - N M V R		-R I F I C S S Q		-D V K K M S P G					
PoptrARF2.1/1-854	-E F V - G M V R		-K I V I Y T R E		-E V Q R I K P G					
PoptrARF16.3/1-700	-N F S - K T A R		-R L T I V T R F		-R Q					
PoptrARF3.1/1-709	-S F L P R V G E		-Q L H P K P P A		-I N N A V G S S					
PoptrARF6.2/1-914	-E F V - N S V W		-C I K I L S P Q		-E V Q Q M G K R				G L E L	
PoptrARF6.4/1-953	-E F V - N N V W		-Y I K I L S P L		-E V Q Q M G K E				G L T S A A S V P S Q K L S N S T S D	
PoptrARF17.1/1-594	-L E L		-S L T S S Y T E		-L L N R I D V Q					
PoptrARF2.4/1-879	-E F C - S M V R		-R I F I Y T K E		-E I N R M E P R				-S L N L E A E G N S R S T D Q M V D L E N R I S	
PoptrARF16.2/1-708	-E F L - K T A R		-R L T I L S Y A		-S R D N F G R					
PoptrARF2.2/1-852	-E F V - G M V R		-K I V I Y T K E		-E A Q K I K P G					
PoptrARF10.1/1-708	-V F M - K T A K		-R L T I L M N R		-A S G N S V G R R					
PoptrARF3.3/1-109										
PoptrARF9.2/1-670	-E F C - N M V R		-R I Y I C S S Q		-D V K R M G P G					
PoptrARF6.1/1-884	-E F V - N S V W		-Y I K I L S P Q		-E V Q Q M G K R				G L E L	
PoptrARF4/1-713	-E F C - N V A T		-K I H I Y T Q E		-E V E K M T L F					
PoptrARF6.3/1-163	-E F V - N S V W		-C I K I L S P Q		-E V Q Q M G K R				G L E L	
PoptrARF3.2/1-714	-S F L P R A G E		-H F H Q S L Q Q							
PoptrARF9.3/1-579	-E F C - K M V K		-K I F I Y S S E		-E V K K T G T R					
PoptrARF6.5/1-907	-E F V - N N V W		-Y I K I L S P L		-E V Q Q M G K E				G L S P	
PoptrARF9.4/1-632	-E F C - K M V K		-K I F I Y S S E		-E V K K M S T R					
PoptrARF7.1/1-1047	-E F M - S C V Q		-S I K I L S S A		-E V Q Q M S L D					
PoptrARF7.2/1-1093	-E F V - S C V Q		-S I K I L S S A		-E V Q Q M S L D					
PoptrARF8.2/1-816	-L F V - N N V W		-Y I K I L S P E		-D V L K M G E Q					
PoptrARF16.6/1-91										
PoptrARF16.4/1-701	-D F F - K T A R		-R L T I V T D S		-S S G N V G I					
PoptrARF16.5/1-536										
PoptrARF10.2/1-713	-V F M - K T A K		-R L T I L M N Q P S T E I D D L S C R							
PoptrARF17.2/1-592	-L S L T S S Y T		-E L L N R I D A		-Q C Q R A S P V					
PoptrARF2.6/1-724	-E F Q - L T V R		-R I F I S P K E		-D I G K L N P L					
PoptrARF2.5/1-614	-E F L - S A V H		-R I F I C P K E		-E T G K L N P					

### Consensus



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LOC\_Os01g13520.1|11667.m01333/1-700  
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LOC\_Os04g43910.1|11670.m04249/1-696  
LOC\_Os04g49230.1|11670.m04840/1-294  
LOC\_Os04g36060.1|11670.m03490/1-1674  
LOC\_Os05g43920.1|11682.m04181/1-700  
LOC\_Os06g09660.1|11680.m00929/1-1056  
LOC\_Os06g46410.1|11680.m04579/1-918  
LOC\_Os06g47150.1|11680.m04656/1-731  
LOC\_Os06g48950.1|11680.m04850/1-1116  
LOC\_Os08g40900.1|11674.m04106\_altsplice/1-1056  
LOC\_Os11g32110.1|11687.m02952/1-812  
LOC\_Os12g41950.1|11686.m04180/1-900  
LOC\_Os12g29520.1|11686.m02861\_altsplice/1-842  
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LOC\_Os05g48870.1|11682.m04683\_altsplice/1-696  
LOC\_Os01g48060.1|11667.m04657\_altsplice/1-723  
LOC\_Os01g54990.1|11667.m05421/1-656  
LOC\_Os10g33940.1|11676.m02996/1-699  
LOC\_Os02g04810.1|11668.m00419/1-1094  
LOC\_Os04g59430.1|11670.m05892/1-530  
LOC\_Os07g08520.1|11673.m00789/1-729  
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ARF3/1-608  
ARF4/1-788  
ARF5/1-902  
ARF6/1-933  
ARF7/1-1165  
ARF8/1-811  
ARF9/1-638  
ARF10/1-693  
ARF11/1-601  
ARF12/1-593  
ARF13/1-623  
ARF14/1-605  
ARF15/1-598  
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ARF17/1-585  
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ARF21/1-606  
ARF22/1-600  
ARF23/1-222  
ARF2/1-859  
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PoptrARF17.2/1-592  
PoptrARF2.6/1-724  
PoptrARF2.5/1-614

## Consensus

2020 2030 2040 2050 2060 2070 2080 2090 2100 2110

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LOC\_Os02g35140.1|11668.m03331/1-757  
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LOC\_Os04g49230.1|11670.m04840/1-294  
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LOC\_Os06g47150.1|11680.m04656/1-731  
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LOC\_Os11g32110.1|11687.m02952/1-812  
LOC\_Os12g41950.1|11686.m04180/1-900  
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LOC\_Os07g08520.1|11673.m00789/1-729  
LOC\_Os07g08530.1|11673.m00790/1-408  
LOC\_Os07g08600.1|11673.m00797/1-525  
ARF1/1-665  
ARF3/1-608  
ARF4/1-788  
ARF5/1-902  
ARF6/1-933  
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ARF8/1-811  
ARF9/1-638  
ARF10/1-693  
ARF11/1-601  
ARF12/1-593  
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PoptrARF2.5/1-614

DAYFPNLHFEACYQNIHTTQAI EAA I ELNL SKVEAGA QGEHK I QRGYLPVTTYSCHYFLDPGFGAA I GNYL VHETAQVRSCHRRKERARKKL SECHID I SAKI PT

### Consensus

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LOC_Os02g06910.1 11668.m00642/1-909					-G I E L F S T S A R R L G N S C D N Y M S R Q E S R S L S T G I A S V G S V E F X				
LOC_Os02g35140.1 11668.m03331/1-757						VVDA I DVEGPGQ I DML A I A L R K H S L N V A Q G S N L E A L P F I T E L I I E I L V V Q T Q R K T Y I E V L S X			
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LOC_Os04g43910.1 11670.m04249/1-696									
LOC_Os04g49230.1 11670.m04840/1-294									
LOC_Os04g36060.1 11670.m03490/1-1674						KKD I R Y C L I M L F V Q G Y K D W F L P P L I N Q R P R R T K L Q C R K L S Q T R K S F A S C S L P L H L D C T G C F I R Q A H R L R K Q P F D H L C S S P R H R M A Y T S R M N L K R K G K X			
LOC_Os05g43920.1 11682.m04181/1-700									
LOC_Os06g09660.1 11680.m00929/1-1056						-GD L G G V P P Q T Q A C S A S D D A N A W R G X			
LOC_Os06g46410.1 11680.m04579/1-918						-L L S S A P G K R L G S C D D Y V S R Q E S R S L S T G I A S V G S V E F X			
LOC_Os06g47150.1 11680.m04656/1-731						-W S T V A I L K A K I A G F L V L V Q F Q G G S V F F N X			
LOC_Os06g48950.1 11680.m04850/1-1116						-G C D L G N N I P P N Q A C S S D G G N A W R A R C D N S E A I L K I S M M K S K V E D V R Y W N T A X			
LOC_Os08g40900.1 11674.m04106_atsplice/1-1056						-G D F G D S F L P N Q A C S S D G G H P W R I T G D X			
LOC_Os11g32110.1 11687.m02952/1-812									
LOC_Os12g41950.1 11686.m04180/1-900						-L S S P G A R M Q Q S N A C D D Y S A S H N M Q N I A G N I A S V A P L D Y X			
LOC_Os12g29520.1 11686.m02861_atsplice/1-842						-N S R S E D S R S T S V E R G L V G E G L Q G G L S T P S L N S E N C X			
LOC_Os04g56850.1 11670.m05610_atsplice/1-956						-G M H V L N D C I Q A A X			
LOC_Os05g48870.1 11682.m04683_atsplice/1-696									
LOC_Os01g48060.1 11667.m04657_atsplice/1-723						-C A T V H E Q R P V V G R V V D I S A V N T M I X			
LOC_Os01g54990.1 11667.m05421/1-656									
LOC_Os10g33940.1 11676.m02996/1-699						-L I E C L V E Q A X			
LOC_Os02g04810.1 11668.m00419/1-1094									
LOC_Os04g59430.1 11670.m05892/1-530									
LOC_Os07g08520.1 11673.m00789/1-729						-S S S S A P I P S R G S A F R I V N P R D G S Q G X			
LOC_Os07g08530.1 11673.m00790/1-408									
LOC_Os07g08600.1 11673.m00797/1-525									
ARF1/1-665						-N K L A V N A R M Q L K A D A E E N G N T E G R S S M A G S R			
ARF3/1-608						-S Q G R D I Y A M R D M L L D I A L			
ARF4/1-788						-N K S C L E Q A A L M M E A S K S S S V S Q P D S S P T I T R V			
ARF5/1-902						-G M K L L N S A G I N D L K T S V S			
ARF6/1-933						-S S N N V D K L P S N G C D D F G N R S D P R N L G N G I A S V G G S F N Y			
ARF7/1-1165						-G N F A G V P V T N Q A C S G G D S G N A W R G H Y D D N S A T S F N R			
ARF8/1-811						-G E G S G G L F P Q N P T H L			
ARF9/1-638						-N Q L R M L L R E V E T T L T T T S K T D N H S N			
ARF10/1-693						-W I T G I R T G E N G I D A S T K T G P L S I F A			
ARF11/1-601						-S L L G D K G T I V N L E S D Q R T V H V			
ARF12/1-593									
ARF13/1-623						-N K F F Q P E S K A L T S S D V P P N V T D N			
ARF14/1-605						-K S L S S			
ARF15/1-598									
ARF16/1-670									
ARF17/1-585									
ARF18/1-602						-L K I S S S L E N E E Y G N E S F E N R S R G			
ARF19/1-1086						-G D L A A I P T T N Q A C S E T D S G N A W K V H Y E D T S A A A S F N R			
ARF20/1-615						-K S L S S			
ARF21/1-606						-K S L S S			
ARF22/1-600									
ARF23/1-222									
ARF2/1-859						-T L S C R S E E A V V G G E S D A K D A K S A S N P S L S S A G N S			
PoptrARF8.1/1-827						-G V E P S G P N A V H R M S G G V A			
PoptrARF1.1/1-660						-I K L S G D E E I K G D S A N A N A D A S V N T E D R S S V V G P G C			
PoptrARF7.3/1-1113						-G D F G N S V L P N Q A G S S D D N V N A			
PoptrARF2.3/1-792						-L E A E G N S Q S A D Q M V D L M G D G T S K H L P A V S P			
PoptrARF5.1/1-933						-G M K L L N S A N I Q G I N T P I T E G I H A			
PoptrARF5.2/1-944						-G M K L L N S A N I Q G T N A P I T E G S H A R			
PoptrARF7.4/1-1137						-G D F G N S V L P N Q A C S S D D N V N A			
PoptrARF16.1/1-669									
PoptrARF1.2/1-662						-I K L L A E E E V K G I G D N A D A A V N T E D R S S T I G P G C			
PoptrARF9.1/1-666						-S K L P M L A L E G E G T V L S S D S A E N			
PoptrARF2.1/1-854						-T L N S R V N E N P S G V E G E D A K E A K H L P L P S A S S P L S C			
PoptrARF16.3/1-700									
PoptrARF3.1/1-709						-C T K A I R Q H A E N Y R I Y			
PoptrARF6.2/1-914						-L N S V P I Q R L S N G S C D D Y V N R Q D S Q N L S N A I T S V G S L D C R E I			
PoptrARF6.4/1-953						-G Y M N R Q E F R N S S N P D G Y L N R Q D F R N S S N G I A S M G S L D Y Q G R C S			
PoptrARF17.1/1-594						-C Q S A S A V E A C S A			
PoptrARF2.4/1-879						-K H L P A V S P S E C Q G L C Y M T G S K A G K V I Q A K W L H H G Q D V S F E A V A M P L F			
PoptrARF16.2/1-708									
PoptrARF2.2/1-852						-A L N S K G V E N P M D M E G E D D A K E A K H L P L P S A C S P M N C			
PoptrARF10.1/1-708						-T W I T G M R N A E N G L E A P N K T G P L S I F A			
PoptrARF3.3/1-109									
PoptrARF9.2/1-670						-S K L P K L P I K G E G T V L S S D S A E N			
PoptrARF6.1/1-884						-L N S F P I Q R L S N G S C D D Y A N R Q D S K S S S T G I T S V G S L D Y			
PoptrARF4/1-713						-G S S P V I M E A S K S S S V G Q P D C S P T V I R V			
PoptrARF6.3/1-163						-L N S V P I Q R L S N G S C D D Y V N R Q D S Q N L S N A I T S V G S L D C R E I			
PoptrARF3.2/1-714									
PoptrARF9.3/1-579						-C K L P A S S F E G E E T V S M D S D H R S D A			
PoptrARF6.5/1-907						-A A S V P C Q K L S N S N S D G H M N T Q G F R N S S N G I A S M G S L D Y			
PoptrARF9.4/1-632						-C K L P A S S F E G E G T V S M E S E H K S D A			
PoptrARF7.1/1-1047						-G D L G N V P A P N Q A C S G T D S G N V V R G Q			
PoptrARF7.2/1-1093						-G D L G N V P V P N Q A C S G T N S G N V V R G Q Y D D N S A A S F N R			
PoptrARF8.2/1-816						-G F E S S G P N A V K G			
PoptrARF16.6/1-91									
PoptrARF16.4/1-701									
PoptrARF16.5/1-536									
PoptrARF10.2/1-713						-R W I T G M R N A E N G Q E A P N K T G C I T Q C G I			
PoptrARF17.2/1-592						-E A C P T			
PoptrARF2.6/1-724						-S P N P S P S G			
PoptrARF2.5/1-614									

## Consensus

-----LGD+GNSPLPNQACLSLDAGEA+RNSSDSISVVGSLDYXEISS-E-----T-R-----X