

GROUP1
AtWRKY20_NTD TPSILADDGYN**WRKY**GQKH-VKGSEFPRSYYKCTH---PNCVKKLFERSHD-G-QITDIYKG-THDHPKP
OsWRKY82_NTD VSVNMVGDG**FNWRKY**GQKQ-VKSSENSRSYYRCTN---SNC~~LA~~KKKV~~EH~~CHPD-G-RVVEIIYRG-THNHEPP
HvWRKY46_NTD VADKASADDGYN**WRKY**GQKH-VKGSENPRSYYKCTH---PNCVKKLLERAVD-G-LITEVVYKG-RHNHPKP
HvWRKY40_NTD -----GTR-----EFP~~RS~~YYKCTH---PTCPVKKKVETTVD-G-QIAEIVYNG-EHNHPQP
HvWRKY42_NTD TNSNPGEDGYN**WRKY**GQKQ-VKSS~~EH~~FRSYYKCTH---PD~~CP~~VKKKV~~VER~~SQD-G-QITEIVYKS-SHNHPLP
AtWRKY19_NTD NV~~DK~~QVNDGYN**WQKY**GQKK-VKGSKF~~FL~~SYYKCTY---LGCPSFKR~~VER~~SLD-G-QVAEIVYKD-RHNHEPP
HvWRKY41_NTD ---ARGDGIN**WRKY**GQKH-VKGGCKPSRYYKCT---LGNPVRKN~~VH~~ESAD-G-R~~AI~~KIVYRG-QHCEHP
HvWRKY6_NTD AAINIVGDG**FNWRKY**GQKQ-VKSSD~~NS~~RSYYRCTN---SS~~LA~~KKKV~~EH~~HCP-----

AtWRKY20_CTD SEVDILDDG**YRWRKY**GQKV-VRGNPNPRSYYKCTA---DGC~~PV~~RKH~~V~~ERASH-DPKAVITTYEG-KHNDHVP
OsWRKY82_CTD VQAGKTS~~DG~~Y**WRKY**GQKI-VKGNPNPRSYYRCTH---DGC~~PV~~RKH~~V~~ERASH-DNNIVVTTYEG-KHNHDQP
HvWRKY46_CTD SEVDILDDG**YRWRKY**GQKV-VKGNPNPRSYYKCTH---TGCPV~~RKH~~VERASH-DPKSVITTYEG-KHNHEVP
HvWRKY42_CTD SEVDILDDG**YRWRKY**GQKV-VKGNPNPRSYYKCTH---QGC~~SV~~RKH~~V~~ERASH-DLKS~~VIT~~TYXG-KHNHEVP
HvWRKY43_CTD SD~~DIL~~DDG**YRWRKY**GQKV-VKGNPNPRSYYKCTH---PNC~~PV~~RKH~~V~~ERASH-DLRAVITTYEG-KHNHDVP
HvWRKY41_CTD SDV~~LLD~~DDG**YRWRKY**GQKV-VRGNPNPRSYYKCTY---QGC~~VD~~KK~~V~~ERSSQ-EPAHVITTYEG-KHTHDVP
HvWRKY6_CTD ---AAKMSD**GYRWRKY**GQKI-VKGNPNPRSYYRCTH---DGC~~PV~~RKH~~V~~ERAPD-DINNMVTTYEG-KHNHGQP
HvWRKY40_CTD ECSSNRDA**AFRWRKY**GQKA-VNGNSFPRSYYRCTS---ARC~~N~~ARK-----

AtWRKY19_CTD SEVDNLDDG**YRWRKY**GQKVGNPNYPRFSSSKD~~VD~~VIYGRADISNEDFISHLRASLCRRGISVYEKFNEV
HvWRKY35_CTD SDV~~LLD~~DDG**YRWRKY**GQKV-ERGNPYPGHGT---FFVLQCC-----MKKALHSHSREIYT-----

Group2a
AtWRKY40 DTTLVVKDG**YQWRKY**GQKV-TRDNPSPRAYFRKAC--APS~~CV~~KKKV~~Q~~RSAE-DQSVLVATYEG-EHNHPMP
OsWRKY71 DLSLVVDDG**YRWRKY**GQKA-TKDNPCPRAYFRCSF--APAC~~PV~~KKKV~~Q~~RSAE-DNTILVATYEG-EHNHGQP
HvWRKY3 DTSLVVKDG**YQWRKY**GQKV-TRDNPSPRAYFRCAF--APSC~~PV~~KKKV~~Q~~RSAE-DSSMVEATYEG-EHNHPRP
HvWRKY DLSLVVKDG**YQWRKY**GQKV-TKDNPCPRAYFRCSF--APG~~CP~~VKKKV~~Q~~RSAE-DKTI~~L~~VATYEG-EHNHTP
HvWRKY2 DLSLVVKDG**YRWRKY**GQKV-TKDNPCPRAYFRCS--APS~~CP~~VKKKV~~Q~~RSAE-DKTLV~~L~~VATYDG-DHNHAPP
HvWRKY23 DLSLVVKDG**YQWRKY**GQKV-TKDNPCPRAYFRCSF--APSC~~PV~~KKKV~~Q~~RSAE-DKTLV~~L~~VATYDG-DHNHAPP

Group2b
AtWRKY72 CDTPTMNDG**CGWRKY**GQKI-AKGNPCPRAYRCTV--APG~~CP~~V~~RK~~QV~~Q~~RCAD-DMSILITTYEG-THSHSLP
OsWRKY27 SAPTVMDG**CGWRKY**GQKI-AKGNPNPRGYRCTV--APG~~CP~~V~~RK~~QV~~Q~~RCNH-DTSLV~~L~~VATYDG-VHNHPIT
HvWRKY37 CDTPTMNDG**CGWRKY**GQKI-SKGNPCPRAYRCTV--APSC~~PV~~R~~K~~QV~~Q~~RCAD-DMSILITTYEG-THSHPLP

Group2c
AtWRKY50 SEVEVLDDG**FGWRKY**GKKM-VKNSPHPRNYYKCSV---DGC~~PV~~K~~R~~V~~R~~VERDRD-DPSFVITTYEG-SHNHSSM
OsWRKY23 SDNDILDDG**YRWRKY**GQKA-VKNSKHPRSYYRCTH---DTCNVKKQV~~Q~~RLAK-DTSIVVTTYEG-VHNHPCE
HvWRKY16 SEVEILDDG**FGWRKY**GKKA-VKNSPNPRNYYRCTS---EGCNVKK~~R~~VERDRE-DHRYVITTYDG-VHTNPLP
HvWRKY17 SEVEILDDG**FGWRKY**GKKA-VKNSPNPRNYYRCSA---EGCGVKK~~R~~VERDRD-DPRYVITTYDG-VHNHATP
HvWRKY5 SEVEVLDDG**YRWRKY**GKKM-VKNSPNPRNYYRCS---EGC~~RV~~K~~R~~V~~R~~VERDRD-DERFVITTYDG-VHNHLAP
HvWRKY19 TEIEILDDG**YKWRKY**GKKS-VKNSPNPRNYYRCTS---EGCSVKK~~R~~VERDRD-DPAYVITTYEG-THSHASP
HvWRKY20 SEIEILDDG**YKWRKY**GKKS-VKNSPNPRNYYRCTS---EGC~~VD~~KK~~V~~ERDRD-DPAYVITTYEG-THSHASP
HvWRKY18 SEIEILDDG**YKWRKY**GKKS-VKNSPNPRNYYRCTS---EGCNVKK~~R~~VERDKD-DAXFVVTMYEG-VHNHSA
HvWRKY13 SENDVLDDG**YRWRKY**GQKA-VKNSAFPRSYYRCTH---HTCNVKKQV~~Q~~RLAK-DTSIVVTTYEG-VHNHPCE
HvWRKY12 SDV~~LLD~~DDG**YRWRKY**GQKA-VKNNPFPRSYYRCTH---QGCNVKKQV~~Q~~RLSR-DEGVVITTYEG-THTHPIE
HvWRKY14 SQDVLDDG**YKWRKY**GQKV-VKNTQHPRSYYRCTH---DKC~~RV~~KK~~V~~ERLAK-DPRM~~VIT~~TYEG-RHVS~~PS~~
HvWRKY15 SEVDHLEDG**YRWRKY**GQKA-VKNSPFRSYYRCTN---SKCTVKK~~R~~VERSSSE-DP-----
HvWRKY36 GGKKT~~PMD~~G**YRWRKY**GQKF-IKNNPHPRSYYKCTS---ARC~~SA~~KKH~~V~~EKST-DPEMLIVTTYEG-SHLHGPO

Group2d
AtWRKY74 KIADIPPE**YSWRKY**GQKP-IGSPHPRGRYYKCSS--VRGCPARKH~~V~~ERCVE-ETSMLIVTTYEG-EHNHSRI
OsWRKY68 KIADIPPE**YSWRKY**GQKP-IGSPYPRGRYYKCTS--VRGCPARKH~~V~~ERALD-DPAMLVTTYEG-EHRHTPG
HvWRKY7 KIADIPPE**YSWRKY**GQKP-IGSPYPRGRYYKCTS--VRGCPARKH~~V~~ERALD-DPAMLVTTYEG-EHRHSPG
HvWRKY10 KAAEIPADDF**SWRKY**GQKP-IGKSPYPRGYKCTH--VRGCPARKH~~V~~ERDPS-DPSMLIVTTYEG-EHRHSPG
HvWRKY8 KISDIPPE**YSWRKY**GQKP-IGSPHPRGRYYKCTS--VRGCPARKH~~V~~ERCVD-EPAMLIVTTYEG-EHSHNRL
HvWRKY9 KVADIPADE**FSWRKY**GQKP-IGKSPHPRGRYYKCSS--VRGCPARKH~~V~~ERCVD-DPAMLIVTTYEG-DHNHNRA
HvWRKY11 KVADIPADSN**YSWRKY**GQKP-IGKSPHPRGRYYRCS--IKDCPARKH~~V~~ERCRG-DPAGMLIVTYEN-DHNHAQP

Group2e
AtWRKY65 GDTTPPSDS**WAWRKY**GQKP-IGKSPYPRGRYYRCS--TKGCPARKQ~~V~~ERSRD-DPTMLLITYTS-EHNHPWP
OsWRKY2 GEGVPPSD**LWAWRKY**GQKP-IGKSPYPRGRYYRCS--SKGCSARKQ~~V~~ERSRA-DPTMLVTTYTS-DHNHPWP
HvWRKY39 GEGVPPSD**SWRKY**GQKP-HGQSPYPRGRYYRCS--FKGCPARKQ~~V~~ERSRT-DPTVLVTTYSY-DHNHPWP
HvWRKY45 GEGNTPTDS**WAWRKY**GQKP-IGKSPFRAYRYYRCS--SKGCP-----
HvWRKY44 AADGTSAD**PWAWRKY**GQKP-IGKSPYPRGRYYRCS--DKACEARKM~~V~~ERCSD-DPNSFILTYTGGEHSHAPAP

Group3
AtWRKY54 VEAKSSEDRY**AWRKY**GQKE-ILNTTFPRSYYRCHTKPTQGCATKQVQKQDQ-DSEMFQITYIG-YHTCTAN
OsWRKY46 DTYAPYDDG**HQWRKY**GEKK-LSNSNFP---RCTYKNDMKCPATKQVQKQDNDPPLFVSVTYFN-HHTCNSS
HvWRKY4 VTARTLNDGKT**WRKY**GQKE-IHACTNPRSYYRCSHKPDQGCQATRQVQESDS-SPSEYLISYGG-QHTCKDP
HvWRKY31 EERRTAEDGKT**WRKY**GQKE-IHNS~~TH~~PLRYFRCTYKHDGSPCATRQVQQSED-DPSLVITYG-----
HvWRKY32 KKMKSLEDGQT**WRKY**GQKE-IQNSKHSKAYFRCTHKYDQCCPARRQAQRCE-DPDTYRVTTYIG-VHTCQDP
HvWRKY34 DTYAPYDDG**HQWRKY**GEKK-LSNSNFPFRYYRCTYKTDLKC~~PA~~TKQVQKQKMSDPLFTVITYFN-HHSCNTD
HvWRKY33 DTFAPHDG**HSWRKY**GEKK-INNCNFPFRYYRCTYKNDMNC~~PA~~TKQIQKDHSDPPLFTVITYFN-EHSCNSA
HvWRKY26 HDLGPLDDG**LSWRKY**GQKD-ILGATYPRAYFRCTHRHSQGCQATKQVQRAHA-DPLLFDVVYHG-AHTCAQ-
HvWRKY27 EDVGPLNDG**LSWRKY**GQKD-ILGATYPRAYFRCTHRHTQGCQATKQVQRTAHA-DP-----
HvWRKY21 EDVGPLDDG**FSWRKY**GQKD-ILGAMYPRAYFRCTHRAQGCYASQKVQRAHG-DPLLFDVVYHG-NHTCAQG
HvWRKY29 QDLGPLDDG**MSWRKY**GQXG-ILGATYPRSYYFRCTHR-----
HvWRKY24_NTD QDIEGHDDG**FSWRKY**GQKD-ILGSRYPRYYRCKHRLTQGC~~EA~~VKQ~~L~~QATDG-DPLLFNAMYVG-NHICQIR
HvWRKY25 QDIEGHDDG**FSWRKY**GQKD-ILGSRYPRYYRCKHRLTQGC~~EA~~VKQ~~L~~QATDG-DPLLFNAMYVG-NHICQIR
HvWRKY22 GAETPVDDG**HSWRKY**GQKD-ILGAKHPRGRYYRCH~~RS~~QGC~~AA~~TQVQRADE-DPTLFDVITYHG-EHTCIGH
HvWRKY30 GAEGPGDDG**HSWRKY**GQKD-ILGAKHPRAYRCH~~RS~~NSQGC~~AT~~KQVQRADE-DPVLFDVVYHG-QHTCRPT
HvWRKY28 GADAPADG**HSWRKY**GQKD-ILGAHPRAYRCH~~Y~~QKNDG~~CA~~ATQVQRADE-DPALFDVITYHG-EHTCLHK
HvWRKY24_CTD QEDYPADDG**YSWSKY**QOMD-ILGSKHPRCYRCHVHKHDKGCQATKQVQ~~RS~~DS-DTQLFDIVYHG-EHTCAEN