

Figure S5 Alignment of the lignin repressor MYB members from gymnosperm and angiosperm species: MYB3-like and MYB4-like copies from *Picea abies* (Pa) and *Pinus taeda* (Pt) along with GbMYBR1 from *Ginkgo biloba* (Gb); CfMYB5 from *Cryptomeria fortune* (Cf); MYB3, MYB4, MYB7 and MYB32 from *Arabidopsis thaliana* (At); MYB156 and MYB221 from *Populus trichocarpa* (Potri); EgMYB1 from *Eucalyptus gunnii* (Eg); ZmMYB31 and ZmMYB42 from *Zea mays* (Zm) and PvMYB4 from *Panicum virgatum* (Pv). Alternative EAR domain in Pt AtMYB4-like1, Pt AtMYB4-like3, Pt AtMYB4-like4 and Pa AtMYB4-like1 are marked with box and, bold and underlined.

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CfMYB5 -----MGRS
GbMYBR1 -----MGRS
Pa_AtMYB3-like1 -----MGRA
Pt_AtMYB3-like2 -----MGRA
Pa_AtMYB4-like3 -----MGRA
Pt_AtMYB4-like1 -----MARA
Pt_AtMYB4-like3 -----MGRA
Pa_AtMYB4-like1 -----MGRG
AtMYB3 -----MGRS
Pt_AtMYB4-like6 -----MKR-
AtMYB32 -----MGRS
AtMYB7 -----MGRS
AtMYB4 -----MGRS
Pt_AtMYB4-like5 -----MGRS
EgMYB1 -----MGRS
Potri_MYB221 -----MGRS
Potri_MYB156 -----MGRS
Pt_AtMYB4-like4 -----MSLFPLSLPSGIPVVAVFLSMKMRKY
Pa_AtMYB4-like2 -----MGRS
Pt_AtMYB4-like2 -----MGRT
ZmMYB31 -----MGRS
PvMYB4 -----MGRS
ZmMYB42 -----MGRS
Pt_AtMYB3-like6 MRKFVIKSITGRSRLPSYIYLLAITGKGRSTKKNWLRDFIEAVGREFVGLVRSYIMGRS
Pt_AtMYB3-like4 -----MMGRS
Pa_AtMYB3-like4 -----MGRS
Pt_AtMYB3-like1 -----MGRS
Pt_AtMYB3-like3 -----MGRS
Pa_AtMYB3-like3 -----MGRP
Pt_AtMYB3-like5 -----MPVAGLPGPGGGEHQPSYRPGKYKMGRS
Pa_AtMYB3-like2 -----MGRS
Pa_AtMYB3-like5 -----MGRS

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R2 Domain

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CfMYB5 AECE----KVHTNKGPWSPEEDALLQCYVQKYG-ADNWSLISKGAGLRRCGKSCRLRWC
GbMYBR1 PMCS---KVGLGNKGAWTVEEDNLLIKYFQTHDEGGGKSWPKKAGLRRCGKSCRLRWM
Pa_AtMYB3-like1 PCCA----KVGLNKGAWSAEEDSLLGKYIQTHG-EGNWRSLPKKAGLRRCGKSCRLRWL
Pt_AtMYB3-like2 PCCT----KVGLNKGAWSAEEDSLLGKYIQTHG-EGNWRSLPKKAGLRRCGKSCRLRWL
Pa_AtMYB4-like3 PCCS----KVGLNRGRWTAEEDEILTKEYIQTHG-EGSWRSLPQNAGLLRCGKSCRLRWI
Pt_AtMYB4-like1 PCCP----IGDRNKGAWTREEDDKLIQYIQTHG-EGGWNSLPKAAGLLRCGKSCRLRWM
Pt_AtMYB4-like3 PCCA----NGDRSKGAWTKEEDDRLTQYIQAHG-EGCWRSLPKAAGLLRCGKSCRLRWI
Pa_AtMYB4-like1 PCCA----NGDRNKGAWTREEDDRLIYIQAHG-EGCWRSLPKAAGLLRCGKSCRLRWI
AtMYB3 PCCE----KAHMNKGAWTKEEDQLLDVYIRKHG-EGCWRSLPRAAGLQRCGKSCRLRWM
Pt_AtMYB4-like6 -----KLLIKGFDAH-----
AtMYB32 PCCE----KDHTNKGAWTKEEDDKLISYIKAHG-EGCWRSLPKASAGLQRCGKSCRLRWI
AtMYB7 PCCE----KEHMNKGAWTKEEDERLVSYIKSHG-EGCWRSLPRAAGLLRCGKSCRLRWI
AtMYB4 PCCE----KAHTNKGAWTKEEDERLVYIKAHG-EGCWRSLPKAAGLLRCGKSCRLRWI
Pt_AtMYB4-like5 PCCP----KAHTNKGAWTKEEDQLVIAIYIRAHG-EGCWRSLPKAAGLQRCGKSCRLRWI
EgMYB1 PCCE----KAHTNKGAWTKEEDDKLIAIYIRAHG-EGCWRSLPKAAGLLRCGKSCRLRWI
Potri_MYB221 PCCP----KAHTNKGAWTKEEDDRLIAYIRTHG-EGCWRSLPKAAGLLRCGKSCRLRWI
Potri_MYB156 PCCP----KAHTNKGAWTKEEDDRLVYIYIRAHG-EGCWRSLPKAAGLLRCGKSCRLRWI
Pt_AtMYB4-like4 SCCE----KAHTKKGAWTQEDARLVYIQAHG-EGGWYLPKAAGLLRCGKSCRLRWI
Pa_AtMYB4-like2 PCCP----KSHTNKGAWTKEEDDRLIAHIRAHG-EGCWRSLPKADAGLLRCGKSCRLRWI
Pt_AtMYB4-like2 PCCP----KGHTNKGAWTKEEDDRLIAHIRAHG-EGRWRSLPKAAGLMRCGKSCRLRWI
ZmMYB31 PCCP----KAHTNKGAWTKEEDERLVYIYIRAHG-EGCWRSLPKAAGLLRCGKSCRLRWI
PvMYB4 PCCP----KAHTNKGAWTKEEDDRLVYIYIRAHG-EGCWRSLPKAAGLLRCGKSCRLRWI
ZmMYB42 PCCP----KAHTNRGAWTKEEDERLVYVYIRAHG-EGCWRSLPRAAGLLRCGKSCRLRWI
Pt_AtMYB3-like6 PSHFSAKNDIAGLKRGAWTPSEDQILSDCVKIHG-VGQWKSMAKKTGLRRSASKSFRFWL
Pt_AtMYB3-like4 PGYSSYSKHEEHLKRGAWTPSEDKLIEYIKTHG-IGQWRDLPRKAGLRRCGKSCRLRWL
Pa_AtMYB3-like4 PSCSSYSKHEDGLNRGAWTAGEDKILSEYVKTHG-VGRWRSLPKAGLRRCGKSCRLRWL
Pt_AtMYB3-like1 PSLWSSCKQEDINRGAWTASEDKILSEYVKTHG-VGRWRSLPKIKTGLKRCAGKSCRLRWL
Pt_AtMYB3-like3 RRCS----TDEGSNRAAWTTKEDMILRDYINIHGVQGGWTSVRDQTALNRSKSCRLRWM
Pa_AtMYB3-like3 QSCS----GLKLRKGAWTSEEDLLKKCIEVHG-EGSWPLLPQKTGLQRSKSCRLRWL
Pt_AtMYB3-like5 PCCS----KEGLNRGSWTKREDMILSEYVRIHG-DGGWRNLPEKAGLRRCGKSCRLRWL
Pa_AtMYB3-like2 PCCS----KEGLNRGAWTKTEDIILCEYIRIHG-DGGWRTLPPKAGLRRCGKSCRLRWL
Pa_AtMYB3-like5 -CCS----KEGLNRGAWSRKEDMILSEYIRIHG-DGGWTLNLPQAGLRRCGKSCRLRWT

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R2 Domain

R3 Domain

bHLH Domain

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CfMYB5      NQLRPQV KHGPFTPAEEALVIVLHAKLGNKWATIARYLPGRTDNEIKNHWNSTLRRRC--
GbMYBR1     NYLRPNIKRGNISPDDEDLIIRLHGLLGNRWALIAGRIPGRTDNEIKNYWYTTLSKRV--
Pa_AtMYB3-like1 NYLRPCI KRGNITADEEELIIRMHALLGNRWSIIAGRVPGRTDNEIKNYWNTNLSKKL--
Pt_AtMYB3-like2 NYLRPCI KRGNITDDEEELIIRMHALLGNRWSIIAGRVPGRTDNEIKNYWNTNLSKKL--
Pa_AtMYB4-like3 NYLRSDVKRGNICKEEEEELIIRLHLLGNRWSIIAGRMPGRTDNEIKNYWNTNLSKRL--
Pt_AtMYB4-like1 NYLRPQLKRGNFSEDEDDLILKLHALLGNKWSLIAGRIPGRTDNEIKNYWNSHLKRL--
Pt_AtMYB4-like3 NYLRPDLKRGGFSEDEDDLILKLHALLGNKWSLIAGRIPGRTDNEIKNYWNSHLKRL--
Pa_AtMYB4-like1 NYLRPNLKRGGFSEDEDDLILKLHALLGNRWSLIAGRIPGRTDNEIKNYWNSYLRKL--
AtMYB3      NYLRPDLKRGNFTEEEDELIIRLHSLLLGNKWSLIAGRIPGRTDNEIKNYWNTNTHIKRKL--
Pt_AtMYB4-like6 -----LKRGNFSEEEDELIIRLHSLLLGNKWSLIAGRIPGRTGNEIKNHWSIHMKRKL--
AtMYB32     NYLRPDLKRGNFTLEEDDLIIRLHSLLLGNKWSLIATRIPGRTDNEIKNYWNTNTHIKRKL--
AtMYB7      NYLRPDLKRGNFTHDEDELIIRLHSLLLGNKWSLIAARIPGRTDNEIKNYWNTNTHIKRKL--
AtMYB4      NYLRPDLKRGNFTEEEDELIIRLHSLLLGNKWSLIAGRIPGRTDNEIKNYWNTNTHIKRKL--
Pt_AtMYB4-like5 NYLRPDLKRGNFSSDEEDDLIIRLHSLLLGNKWSLIASRIIPGRTDNEIKNYWNTNTHIKRKL--
EgMYB1      NYLRPDLKRGNFTEEEDEIIRLHSLLLGNKWSLIAGRIPGRTDNEIKNYWNTNTHIKRKL--
Potri_MYB221 NYLRPDLKRGNFTEEEDELIIRLHSLLLGNKWSLIAGRIPGRTDNEIKNYWNTNTHIKRKL--
Potri_MYB156 NYLRPDLKRGNFTEEEDELIIRLHSLLLGNKWSLIAGRIPGRTDNEIKNYWNTNTHIKRKL--
Pt_AtMYB4-like4 NYLRPDLKRGNFSEEEDELIIRLHSLLLGNKWSLIAARMAGRTDNEIKNYWNTNTHIKRKL--
Pa_AtMYB4-like2 NYLRPDLKRGNFSEEEDELIIRLHSLLLGNKWSLIAARIPGRTDNEIKNYWNSHIKRL--
Pt_AtMYB4-like2 NYLRPDLKRGNFSEEEDELIIRLHSLLLGNKWSLIAARIPGRTDNEIKNYWNSHIKRL--
ZmMYB31     NYLRPDLKRGNFTEEEDELIVKLHSLVLLGNKWSLIAGRIPGRTDNEIKNYWNTNTHIKRKL--
PvMYB4      NYLRPDLKRGNFTAEDDLIVKLHSLLLGNKWSLIAARIPGRTDNEIKNYWNTNTHIKRKL--
ZmMYB42     NYLRPDLKRGNFTAEDDLIVKLHSLLLGNKWSLIAARIPGRTDNEIKNYWNTNTHIKRKL--
Pt_AtMYB3-like6 NYLRPDLKRGNISADEEELIIRLHRLLLGNRWTLTTGRFPGRSDNEIKNYWNTNTHIKRKL--
Pt_AtMYB3-like4 NYLRPDLKRGNISPEEDELIVLRLHRLLLGNRWTLIAGRIPGRTDNEIKNYWNTNTHIKRKL--
Pa_AtMYB3-like4 NYLRPDLKRGNISPEEELIIRLYRLLGNRWALISGRIPGRTDNEIKNYWNTNTHIKRKL--
Pt_AtMYB3-like1 NYLRPDLKRGNISPEEELIIRLYRLLGNRWALISGRIPGRTDNEIKNYWNTNTHIKRKL--
Pt_AtMYB3-like3 NYLRPDLKRGNISPEEDELIVLRLHRLLLGNRWALISGRIPGRTDNEIKNYWNTNTHIKRKL--
Pa_AtMYB3-like3 NYLSPNVKRGNISEDEEELIIRMHRLLLGNRWALISGRIPGRSDNEIKNYWNTNTHIKRKL--
Pt_AtMYB3-like5 NYLRPDLKRGNISPEEELIIRLHRLLLGNRWALISGRIPGRTDNEIKNYWNTNTHIKRKL--
Pa_AtMYB3-like2 NYLRPDLKRGGISPEEELIIRLHRLLLGNRWALISGRIPGRTDNEIKNYWNTNTHIKRKL--
Pa_AtMYB3-like5 NYLRPDLKLGNISPEEELIIRMHRLLLGNRWALISGRIPGRTDNEIKNYWNTNTHIKRKL--
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CfMYB5      -----Q-----DSNP-----
GbMYBR1     ---ALK-----GNEA-----
Pa_AtMYB3-like1 ---AVR-----GIDP-----
Pt_AtMYB3-like2 ---AVR-----GIDP-----
Pa_AtMYB4-like3 ---ANR-----GIDT-----
Pt_AtMYB4-like1 ---ISM-----GVDP-----
Pt_AtMYB4-like3 ---ISM-----GVDP-----
Pa_AtMYB4-like1 ---ISM-----GVDP-----
AtMYB3      ---LSR-----GIDP-----
Pt_AtMYB4-like6 ---SSR-----GLHP-----
AtMYB32     ---LRK-----GIDP-----
AtMYB7      ---LSK-----GIDP-----
AtMYB4      ---INR-----GIDP-----
Pt_AtMYB4-like5 ---LEK-----GIDP-----
EgMYB1      ---LNR-----GIDP-----
Potri_MYB221 ---LNR-----GIDP-----
Potri_MYB156 ---LNR-----GIDP-----
Pt_AtMYB4-like4 ---LSR-----GLDP-----
Pa_AtMYB4-like2 ---LSR-----GLDP-----
Pt_AtMYB4-like2 ---LSR-----GIDP-----
ZmMYB31     ---LSR-----GIDP-----
PvMYB4      ---LSR-----GIDP-----
ZmMYB42     ---LGS-----GIDP-----
Pt_AtMYB3-like6 ---QM-----GM-P-----
Pt_AtMYB3-like4 ---QK-----EFD-----
Pa_AtMYB3-like4 ---RMG-----ESDP-----
Pt_AtMYB3-like1 ---QK-----EFKH-----
Pt_AtMYB3-like3 LNKDRSEAKMTEEDMGVSPRLDLVGNQIAVNIENNCVGRQICVWGSQRCIRGLRRALS
Pa_AtMYB3-like3 ---NRSR-----SDDF-----
Pt_AtMYB3-like5 ---SSQ-----ESQD-----
Pa_AtMYB3-like2 LLSMKN-----SQSK-----
Pa_AtMYB3-like5 ---L-----SIDD-----

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CfMYB5 -----GLAAVTH-----NED-----
GbMYBR1 -----KEHKTYPM-----KRS-----
Pa_AtMYB3-like1 -----KTHKKVTT-----DSINRASDRFNQ
Pt_AtMYB3-like2 -----KTHKKITT-----DGTNRVNGDGFN
Pa_AtMYB4-like3 -----ATHKPLGE-----VAEIFIQAKP--
Pt_AtMYB4-like1 -----LTHRPFQK-----ICR-----
Pt_AtMYB4-like3 -----LTRRPFQR-----NSR-----
Pa_AtMYB4-like1 -----LNHRPFQK-----NSR-----
AtMYB3 -----NSHRLINE-----SVSPSSLQND-
Pt_AtMYB4-like6 -----QTHRSLRP-----PH-----
AtMYB32 -----ATHRPINE-----TKTSQDS-----
AtMYB7 -----ATHRGINE-----AKI-----
AtMYB4 -----TSHRPIQE-----SSASQD-----
Pt_AtMYB4-like5 -----NTHLPILP-----DHGS-----
EgMYB1 -----ATHRLINE-----PAQD-----
Potri_MYB221 -----ATHRPLNE-----PA-----
Potri_MYB156 -----ATHRPLNE-----PAV-----
Pt_AtMYB4-like4 -----QTHRSLCP-----PH-----
Pa_AtMYB4-like2 -----GSHRPLCF-----PH-----
Pt_AtMYB4-like2 -----RSHRPLCP-----P-----
ZmMYB31 -----VTHRPVTE-----H-----
PvMYB4 -----VTHRPIAD-----
ZmMYB42 -----VTHRRVAG-----
Pt_AtMYB3-like6 -----IDSRNYNE-----KEVQDRY-----
Pt_AtMYB3-like4 -----EYQEPFKE-----RAIPAPSIYDKG
Pa_AtMYB3-like4 -----RFQNLCKR-----RDVPPYPNYD--
Pt_AtMYB3-like1 -----KFQNHFKR-----KHMPSDSNYG--
Pt_AtMYB3-like3 RDL SARLRWLNLYLRPDIKRGNISPEEELIRMRHLLGNRWSLIAGRLPGRTDNEIKNYW
Pa_AtMYB3-like3 -----NCNKE-----
Pt_AtMYB3-like5 -----KTSKLSA-----SSKSPVP-----
Pa_AtMYB3-like2 -----VTKNVKST-----SK-----
Pa_AtMYB3-like5 -----SQKSTAR-----

CfMYB5 -----NSSSLKRSSCSNDDGS-----STLQDENCGFEEA-----
GbMYBR1 -----RGHSACKQLIMPDSNT-----KMQDLLSASPTRKELEVSTNQS-----
Pa_AtMYB3-like1 RKGGKLY-DCSQRSQRLERNVVRAGQSTGLVIPNVHNLKADLKGGYIAGPREIQSSNSIR
Pt_AtMYB3-like2 QRKGGKIYDSPQKPRQPERNVARAAQSTGVVIPNVHNLKADLKAQYIARIREFKSSNTIS
Pa_AtMYB4-like3 -----SIITNVRNTSLNDIKP-----VRCSNIEASMVCSIDSALKKISK
Pt_AtMYB4-like1 -----HDQPLSENVSEPEIAS-----SGKFVQDFFHC-----
Pt_AtMYB4-like3 -----HDLSLPEKVEVPEIAR-----PREIVENFFHSP-----
Pa_AtMYB4-like1 -----HRPSASGNVGEPTAR-----SREIVPDFFHCP-----
AtMYB3 -----VVETIHLDFSGPVKPE-----PVREEIGMVNNC-----
Pt_AtMYB4-like6 -----NSSTLNSPPPDHDI-----LAFESRRRAEIAIDFFQLEGLKS-----
AtMYB32 -----SDSSKTEDPLVKILSFG-----PQLEKIANFGDER-----
AtMYB7 -----SDLKKTQDQIVKDVSF-----VTKFEETDKSGDQ-----
AtMYB4 -----SKPTQLEPVTSNTINISF-----TSAPKVETFHESI-----
Pt_AtMYB4-like5 -----FGSSNENHVFSKRSRC-----KPSEVLTDFFQQQ-----
EgMYB1 -----HHDEPTISFAANSKEI-----KEMKN-----
Potri_MYB221 -----QEASTTISFSTTTS-----VKEESLSSVKEES-----
Potri_MYB156 -----QEATTTISFTTTTTSV-----LEEESLGSIIKEE-----
Pt_AtMYB4-like4 -----NSNSTLSSPSVPEHEI-----SPLQNPRADIAIDFFQQD-----
Pa_AtMYB4-like2 -----HNNTTSPRPAPDHEF-----PAFQNLKTPFITDFFQQH-----
Pt_AtMYB4-like2 -----SNTTSLWSAPDREF-----PAIQNLRTPEITDFFQHN-----
ZmMYB31 -----HASNITISFETEVAAS-----ARDDKKGAVFRLE-----
PvMYB4 -----AARNVTISFQPD-----PSQQQLSDDAEAP-----
ZmMYB42 -----GAATTISFQPPSPNTAV-----AAAAE-----
Pt_AtMYB3-like6 -----DGVTONTPKTMPLRYWEKEE-----VDVENLDCYNYDC-----
Pt_AtMYB3-like4 FLHRD-----NDSYDILPFKTRAVRH-----CGRTIVDGDNLDSYDHC-----
Pa_AtMYB3-like4 -----EDIYASQNAPVKTGVRVYGRAV-----AELENFDSYNPDH-----
Pt_AtMYB3-like1 -----EDRVVDKININAGEDTPSKATGEISCARAVGKVDNLDKYNQDN-----
Pt_AtMYB3-like3 NTHLSKKLTMSSQNPKFPMPAPADPEQTASSESEEDVVRASADYRVIHHSGMRLAPAKIG
Pa_AtMYB3-like3 -----NVVQTLTSEEGKG-----GQEI GAENYSSHS-----
Pt_AtMYB3-like5 -----VQN RVFKATAVKITTA-----VRHTEIIRPNACN-----
Pa_AtMYB3-like2 -----SSPVQNRVFKTTPVKV-----TTAVRLESETIRPK-----
Pa_AtMYB3-like5 -----NLETSSKPPPPNHV-----FKTTPIKITTAVKFSETVGPKRCN-----

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CfMYB5          -----DS---KR-----LKS
GbMYBR1        -----LSE
Pa_AtMYB3-like1 SSSPINTPIQPKSNDFMQPQPVVSSDAGKQ-----TDD
Pt_AtMYB3-like2 SSSRLNAQIEPKSRELSTEDPIFRCSASEKTRTTHPDFMEHPVASSDAGKQ--TND
Pa_AtMYB4-like3 KSSKKRSVWKEK---QM-----PFE
Pt_AtMYB4-like1 -----PSE
Pt_AtMYB4-like3 -----SEL---CG-----DSE
Pa_AtMYB4-like1 -----PE-----LST
AtMYB3         -----SSG-----TTS
Pt_AtMYB4-like6 -----SPI
AtMYB32        -----IQK
AtMYB7         -----KQ---NK-----YIR
AtMYB4         -----SFPGKSEK-----ISM
Pt_AtMYB4-like5 -----TPG---GT-----SSV
EgMYB1         -----NAE
Potri_MYB221   -----NKE---KI-----ISA
Potri_MYB156   -----NKE---KI-----ISA
Pt_AtMYB4-like4 -----RS---ER-----SPV
Pa_AtMYB4-like2 -----RSE
Pt_AtMYB4-like2 -----RS---ES-----SPI
ZmMYB31        -----EEEERNKATMVVGRD-----RQS
PvMYB4         -----PPP
ZmMYB42        -----TAA
Pt_AtMYB3-like6 -----PPD
Pt_AtMYB3-like4 -----VPD
Pa_AtMYB3-like4 -----VPD
Pt_AtMYB3-like1 -----VPV
Pt_AtMYB3-like3 GTSISAGVPAPVSSDEVINMKSWKQLLEDLSMSDFDSEDDTSLMGIELSDVVGSEAPL
Pa_AtMYB3-like3 -----QPK
Pt_AtMYB3-like5 -----GDGCSNFI-----PGE
Pa_AtMYB3-like2 -----GSM
Pa_AtMYB3-like5 -----GYGRSNCS-----SAE

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**EAR
suppression domain**

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CfMYB5          HGNDCLEES-----KQAPQVVYKVPVAVASC-----GFLKPPQEAT---
GbMYBR1        SVVSNDDVVRTDSNVQSGSPGLQEIIRASRIFLPS-----FRGNQVSSHSELMAPANP
Pa_AtMYB3-like1 STVYCSSDSAASCALIDHLSSEDDQYLSLEGNMNECYSHYVAEESGTLKSSNPQTHSEA
Pt_AtMYB3-like2 STVYCSSDSAASCALIEHFSSEDDHHYLSMEGNMNECYSQTLAEDYGS LKPSTPHTSESEP
Pa_AtMYB4-like3 EQIPSGQSSSCSESSCGNLSSPDLLMAACCNPPSCDQVKKLSFEKTPCQDRSTDHVLVRE
Pt_AtMYB4-like1 LSVESAQLSNAAGGLARDGQPDNLNLDLGLTV-----TCPSTHSEG--
Pt_AtMYB4-like3 QVSDAASES---LARD-EPS-TLNLNLELSINW--A-----SMHVAVKEEP
Pa_AtMYB4-like1 KSDQVSDAASGLARKELPRFNLNLNLELSITRPS-----IHAAGKEAVVNS
AtMYB3         EKDYGNED-----WVLNLELSVGPSTY-----RYESTRKVSVDVSAEST
Pt_AtMYB4-like6 ESAASTDEE-----HPCPDINLDLCMLSS-----NSAPA-----
AtMYB32        RVEYSVVEE-----RCLDLNLELRISPPW-----QDKLHDE-----
AtMYB7         NGLVCKEER---VVVEEKIGPDNLNLELRISPPW-----
AtMYB4         LTFKEEKDE---CPVQEKFPDLNLELRISLPD-----DVDR-----
Pt_AtMYB4-like5 LKVIANKQD-----HDYDKDVNLDLISITLPS-----LCSSQGSSSSSRELSSGI
EgMYB1         LNFMCNLEESADVASSARERCPLNLELRISPPS-----HQLHQPEP-----
Potri_MYB221   AAFICKEEK---TPVQERCPLNLELRISLPC-----QNQPDRH-----
Potri_MYB156   TAFVCKEEK---TQVQERCPLNLELRISLPS-----QNQPDRH-----
Pt_AtMYB4-like4 ENAACKEEE-----HPDLNLDLISLPS-----NSTLAAN-----
Pa_AtMYB4-like2 SSPIVPEAS-----DAEHPDLNLDLISLPS-----NSPPRRE-----
Pt_AtMYB4-like2 LPAAPDAEE-----DPDLNLDLISLPS-----NSSPAANTAQSV
ZmMYB31        QSQSHSPAGEWGGQKRPLKCPDLNLDLISPPC-----QEEEEEMEEAAMR
PvMYB4         PPPQQQQQ---LKPPPRCPDLNLDLISPPC-----HKEEEDQELIKPA
ZmMYB42        QAPIKAET---AAVKAPRCPLNLDLISPPC-----QHEDDGEETEEELDLIKPAV
Pt_AtMYB3-like6 SHDGINPEE-----EGMKGGDHHVSEKDAETWCQLLEDCTGYLYDRLEFVQGL---
Pt_AtMYB3-like4 THDGINQEE-----GLKATNHHVVEIDTSKSWCQLLEDCTGDYQYDRLEEISGLQPN
Pa_AtMYB3-like4 THDGSTQEG-----LKAADDHVVVEIDTSKSWSQLLEHLCMGDYQYDRLOPNASS---
Pt_AtMYB3-like1 TNEGINQEG-----GLRAADDNVEIDTSKSWLQQLLEDCEMGEYHYNLLQPNIMTNTK
Pt_AtMYB3-like3 MEIQTNVSCSTSGPNEPVHSHGHLADATSNQRSSSENVLYSQDCNVLSPPTDNTLDFR
Pa_AtMYB3-like3 SRISINTDH-----NQHADMLEEPSTGLTK-----CQSYRNTPTQETDL---
Pt_AtMYB3-like5 ALKLCNVEN-----TTKSSSGLLVNNSSSTKQPERNAFATDNLVQT EATNCTSSMLNF
Pa_AtMYB3-like2 NGYGCNSRS---SDEAFKLCNAKETNTSSKSWCDLLGNDTEGRISNSSMSLALERS--
Pa_AtMYB3-like5 AIKLCNIKE---NTNSIPHDDSEHIVFDMTDVNL-----ETEAGNCTSAIWSL

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EAR
suppression domain

CfMYB5 -----VSSASVDPPT-----S**LCLSL**PGLEPPTTPSSKPVDAQTRKQDPSPPPTP
GbmYBR1 MIESNIDRKLFSLVDD-----YLSVSTELSLGFGSMNCS-----
Pa_AtMYB3-like1 I----CDSRERDNGGVPVQKHDQFPEYDVFVFFDVRNAENEICC-----
Pt_AtMYB3-like2 I----CDSRERDNDSHVQKHDQFPEYDVFVFFDVRNAENEICC-----SADQWVHEQE
Pa_AtMYB4-like3 I**KEEDCNSDDPVNSK**-----LWEEFSNSINILNSDMENMMFGYLETEVELFGCLA
Pt_AtMYB4-like1 -----KQNVVNSEQGE-----NDLGEGMGYLAYHSGECA-----
Pt_AtMYB4-like3 I----LKS**KPGEEGA**-----GGRFDEKGYL-FRYEECP-----
Pa_AtMYB4-like1 -----EQGESNLSE**GK**-----GYLCRHGECPPPQSPD**G**-----
AtMYB3 RRWGS**ELFGA**HESDAV-----CLCCRI**GLFR**NE**SCR**NCR-----
Pt_AtMYB4-like6 -----
AtMYB32 -----RNLRFGRVKYR-----CSACR-FGGNGKECSCN-----NVKC
AtMYB7 -----Q**NO**RE-----ISTCTASRFYMENDMECS-----SETVKCQ
AtMYB4 -----LQGHG**KSTTPR**-----CFKCS-LGMINGMECRG-----
Pt_AtMYB4-like5 R----LSNDCTQD**HK**-----EKICCHIGLRTV**G**ESCCS-----
EgMYB1 -----LLRFTGR**KSD**L-----CXECN-LGLKNSQNCRC**S**-----
Potri_MYB221 -----QAFK**TGG**STL-----CFACS-LGLQNSKDCSCS-----
Potri_MYB156 -----QPFK**TGG**RS**L**-----CFACS-LGLQNSKDCSCN-----
Pt_AtMYB4-like4 -----RAMDANS**NSGL**-----GVWCH-TGPQ**INS**DP**RCE**-----
Pa_AtMYB4-like2 -----
Pt_AtMYB4-like2 R----KTVD**SNL**NSGS-----SEVCY**PVGLQ**IN**YGK**YCD-----
ZmMYB31 -----VRPAVK**REAGL**-----CFGCS-LGLPRTADCKCS-----
PvMYB4 AVKREMLQAGHG**TGL**L-----CFGCSLGLQ**KGAAG**CTCS-----
ZmMYB42 VKREALQAGHG**HGHL**-----CLGCGLGGQ**KGAAG**CSCS-----
Pt_AtMYB3-like6 -----Q**TDRI**NLLPPS-----VSPSG**SEILQEK**QSSSCN-----
Pt_AtMYB3-like4 SMTNSSNVTDQ**HQHP**QS-----PFV**SQSIILQ**ENHSSSCD-----
Pa_AtMYB3-like4 -----SAVQ**LPP**QLSV-----NLSCPRFIFDL**PQRS**HTD--SKKKQ**ITMD**GAF**EIE**
Pt_AtMYB3-like1 -----CGT**DYD**NQ**FP**S-----PTLGRD**ILLQ**ENGASSCN-----
Pt_AtMYB3-like3 I**QD**FS**LES**LL**PSV**YN-----FDEIC**PVQ**S**QLNS**SDH**VSCFAVA**AEQ**AMTDI**YNNT
Pa_AtMYB3-like3 -----I**HF**DY-----K**FC**QNS**ADDLFQ**AGNCS-----
Pt_AtMYB3-like5 G**DQ**Q**SPSYD**Y**FE**G**DAA**-----N**LAES**LL**FLTD**LSS**PDCN**-----LLAS**P**SDC**ST**
Pa_AtMYB3-like2 -----PNS**Y**Y**F**GT**DAA**-----T**LAD**SL**LDL**NELSS**PDCS**-----LLS**PP**SN**CSA**
Pa_AtMYB3-like5 **EEERS**PH**S**Y**F**AV**DTA**-----T**LDE**SL**SEL**NVLS**PDCN**-----

CfMYB5 VPTVPVPV**PVQV**IPV**PASAF**GY**VRA**-----DEAM**S**W**S**AV**V**RAT**V**AHT**L**AP**IL**NS**P**
GbmYBR1 -----V**S**K**F**STNS**HN**LY**LM**GSSLS**NT**-----D**H**HM**P**CGD**Q**S**VCRD**QY**R**WM**NT**-----
Pa_AtMYB3-like1 NDDQ**WV**HE**Q**MP**L**HS**W**DN**Q**IDD**Q**G**K**-----E**H**FG**S**H**V**ND**V**TAM**S**WE**A**S**FW**F-----
Pt_AtMYB3-like2 **A**EF**M**Q**K**Q**EMA**Q**L**GS**WE**K**Q**IDD**Q**E**K**-----E**N**F**S**H**V**ND**V**TAM**S**WE**A**S**FW**F-----
Pa_AtMYB4-like3 **D**PP**M**PA**N**VA**DE**GN**ME**T**L**SS**D**AD**Y**NT**E**-----D**E**L**W**ST**F**LS**N**SE**K**TT**L**PS**P**SS**L**SA-----
Pt_AtMYB4-like1 -----PP**M**LL-----R-----
Pt_AtMYB4-like3 -----V**G**K-----S**L**LR-----
Pa_AtMYB4-like1 -----
AtMYB3 -----VSD**V**RT**H**-----
Pt_AtMYB4-like6 -----
AtMYB32 Q**T**ED**S**SS**S**YS**ST**DI**SS**IG**Y**DF**L**GL-----N**N**TR**V**-----L**D**F**ST**LE**M**K-----
AtMYB7 T**E**NS**S**SI**S**Y**SS**DI**SS**SV**G**Y**DF**L**GL**-----K**T**RI-----L**D**FR**S**LE**M**K-----
AtMYB4 -**R**MR**CD**V**V**GG**S**SK**G**DS**M**NG**F**DF**L**GL-----A**K**K**E**TT**S**L-----L**G**FR**S**LE**M**K-----
Pt_AtMYB4-like5 -----G**C**W**D**-----
EgMYB1 -----V**G**VI**E**SE**T**SV**G**Y**DF**L**GL**-----K**A**SV-----L**D**Y**R**S-----
Potri_MYB221 --V**I**V**G**T**I**GS**S**SS**AG**SK**T**G**Y**DF**L**GM-----K**S**GV-----L**D**Y**R**G**L**E**M**K-----
Potri_MYB156 --V**I**V**ST**V**G**SS**G**ST**KT**G**Y**DF**L**GM-----K**S**GV-----L**D**Y**R**S**L**E**M**K-----
Pt_AtMYB4-like4 -----N**R**Y**C**ER**NS**F**T**E**L**D**S**-----S**S**GS**I**H**G**I**L**D**---**L**Q**L**S**AL**G**V**Q**-----
Pa_AtMYB4-like2 -----E**S**F**Q**R**L**-----
Pt_AtMYB4-like2 -----S**G**Y**C**E**Q**N**A**S**C**F**S**Q**F**-----R**L**V**L**-----
ZmMYB31 -----S**S**S**F**L**GL**-----R**T**A**M**-----L**D**FR**S**LE**M**K-----
PvMYB4 -----S**N**SH**F**L**GL**-----R**V**G**M**L-----L**D**FR**G**L**E**M**K**-----
ZmMYB42 -----N**G**H**H**F**L**GL-----R**T**S**V**-----L**D**FR**G**L**E**M**K**-----
Pt_AtMYB3-like6 -----L**L**E**E**E**F**L**Q**T-----E**N**F**N**S**T**Y**F**-----
Pt_AtMYB3-like4 -L**I**Q**Q**E**P**H**S**K**D**F**I**S**S**F**S**F**L**D**L**G**E**-----Q**S**I**L**L**P**-----
Pa_AtMYB3-like4 N**L**E**L**L**D**Q**E**K**G**R**N**Q**D**W**V**C**Q**G**G**E**S**H**D**G**T**-----T**S**Q**E**R**G**M**P**R**D**L**G**R**A**E**R**S**R**Q**L**D**H**G**S**
Pt_AtMYB3-like1 -F**D**D**Q**E**F**P**H**S**K**E**F**I**S**P**S**D**N**C**L**D**L**G**E**-----P**S**F**V**I**P**-----
Pt_AtMYB3-like3 L**E**P**D**W**L**T**P**VE**Y**E**K**Q**S**T**S**D**Q**M**N**L**L**G**N**F**L**S**E**E**N**W**E**E**E**V**P**T**S**L**S**K**I**Q**E**E**E**Y**R**A**I**L**V**D**I**S**N**K
Pa_AtMYB3-like3 -----A**S**D**C**SE**T**E**I**L**Q**L**L**H**P**C**S**D**M**-----E**E**Y**W**R**E**V**H**G**D**A**Q**L**F**A**F**D**S**V**W**N**M**V-----
Pt_AtMYB3-like5 **D**F**A**SE**D**L**Y**R**G**PA**A**L**P**E**E**T**N**G**F**ED**M**C**S**-----D**Q**NN**M**Q**R**V**N**S**S**-----S**M**D**Q**E**L**E**G**F**Y**NN**A**
Pa_AtMYB3-like2 **D**F**G**L**Q**D**F**CG**E**P**V**T**L**AE**A**NE**F**EV**V**S**S**-----D**Q**S**I**M**Q**R**D**K**G**F**T**V**L**D**D**Q**Q**E**I**E**F**Y**D**H**T**
Pa_AtMYB3-like5 -----L**L**Y**S**A**S**GS**T**D**F**E**L**E**E**F**Y**R**E**-----A**A**T**L**A**T**G**I**N**D**S**V**F**T**-----

CfMYB5	PPRGSASDHG-----
GbMYBR1	-----
Pa_AtMYB3-like1	-----
Pt_AtMYB3-like2	-----
Pa_AtMYB4-like3	-----
Pt_AtMYB4-like1	-----
Pt_AtMYB4-like3	-----
Pa_AtMYB4-like1	-----
AtMYB3	-----
Pt_AtMYB4-like6	-----
AtMYB32	-----
AtMYB7	-----
AtMYB4	-----
Pt_AtMYB4-like5	-----
EgMYB1	-----
Potri_MYB221	-----
Potri_MYB156	-----
Pt_AtMYB4-like4	-----
Pa_AtMYB4-like2	-----
Pt_AtMYB4-like2	-----
ZmMYB31	-----
PvMYB4	-----
ZmMYB42	-----
Pt_AtMYB3-like6	-----
Pt_AtMYB3-like4	-----
Pa_AtMYB3-like4	RSSPS-----
Pt_AtMYB3-like1	-----
Pt_AtMYB3-like3	-----
Pa_AtMYB3-like3	-----
Pt_AtMYB3-like5	QDEDWIHELDCLENSGAQPLSSLLLESEDEWEERSIGKLALEDHVQI
Pa_AtMYB3-like2	QPLDWIHELDIYEKSSPRALSFLLLESEDEREEKLGDHTQIPDVV--
Pa_AtMYB3-like5	-----