

Figure S4 Alignment of *Arabidopsis thaliana* MYB4 (AtMYB4), *Gingko biloba* MYB (GbMYB1) and all MYB4-like copies from *Pinus taeda* (Pt)

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GbMYB1          -----MGRSPMCSKVGLGLNKGAWTVEEDNLLKYFQTHDEGG
Pt_AtMYB4-like1 -----MARAPCCPIG--DRNKGAWTREEDDKLIQYIQTHGE--G
Pt_AtMYB4-like3 -----MGRAPCCANG--DRSKGAWTKEEDDRLTQYIQAHGE--G
Pt_AtMYB4-like5 -----MGRSPCCEKA--HTNKGAWSKEEDQVLIAYIRAHGE--G
AtMYB4         -----MGRSPCCEKA--HTNKGAWTKEEDERLVAYIKAHGE--G
Pt_AtMYB4-like6 -----MKR-----KLLIKGFDAH-----
Pt_AtMYB4-like4 MSLFPLSLPSGLPVVAVLFLSMKMRYSCCEKA--HTKKGAWTQQEDARLVAYIQAHGE--G
Pt_AtMYB4-like2 -----MGRTPCCEKG--HTNKGAWTKEDDRLIAHIRAHGE--G
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GbMYB1          GKSVPKAGLKRCGKSCLRWMNYLRPNIKRGNISPDEDLIRLLGLLGNRMALIAGR
Pt_AtMYB4-like1 GWNSLPKAAGLLRCGKSCLRWMNYLRPQLKRGNFSEDEDDLILKLHALLGNKWSLIAGR
Pt_AtMYB4-like3 CWRSLPKAAGLLRCGKSCLRWINYLRPDLKRGFSEDEDDLILKLHALLGNKWSLIAGR
Pt_AtMYB4-like5 CWRSLPKAAGLQRCGKSCLRWINYLRPDLKRGNFSEDEDDLILKFHSMLGNKWSLIASR
AtMYB4         CWRSLPKAAGLLRCGKSCLRWINYLRPDLKRGNFTEREDELILKLHSLLGNKWSLIAGR
Pt_AtMYB4-like6 -----LKRGNFSEEDELIRLHSLLGNKWSLIAGR
Pt_AtMYB4-like4 GWRYLPKAAGLLRCGKSCLRWINYLRPDLKRGNFSEEDELILKLHSLLGNKWSLIAAR
Pt_AtMYB4-like2 RWRSLPKAAGLMRCGKSCLRWINYLRPDLKRGNFSEEDEFLILKLHSILGNKWSVLAAR
                :***.: :*: :*: :*: :*: :*: :*: :*: :*: :*

GbMYB1          IPGRTDNEIKNYWTLSKRVALKGNEAKEHKTYFMKRSRGHSACKQLIMPDSNTKMQDL
Pt_AtMYB4-like1 LPGRTDNEIKNYWSLLKKLISMGVDPLTRH-----PFQKICRH-----
Pt_AtMYB4-like3 LPGRTDNEIKNYWSLLKKLISMGVDPLTRH-----PFQRSRH-----
Pt_AtMYB4-like5 LPGRTDNEIKNYWNTHIKRKLLEKGIDPNTHL-----PILPDHGS-----
AtMYB4         LPGRTDNEIKNYWNTHIRRKLINRGIDPTSHR-----PIQESSAS-----
Pt_AtMYB4-like6 LPGRTDNEIKNYWSLLKKLSSRLHPQTHR-----SLRPPHNS-----
Pt_AtMYB4-like4 MAGRTDNEIKNYWNTHIKRKLSRGLDPQTHR-----SLCPPHNS-----
Pt_AtMYB4-like2 LPGRTDNEIKNYWSLHIKRKLSRGIDPRSHR-----FLCPPSNT-----
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GbMYB1          LSASPTRKELVSTNQSLSESVSNTDDVRTDSNVQSGSPLQEIRASRIFLPSFRGNQV
Pt_AtMYB4-like1 -----DQLSE-----NVSE-----PEIASSGKF---VQDFFHC-P
Pt_AtMYB4-like3 -----DLSLPE-----KVEV-----PEIARPREI---VENFFHS-P
Pt_AtMYB4-like5 -----FGSSNE-----NHVF-----SKRSRCKPSEV-LTDFFQQ--
AtMYB4         -----QDSKPTQLEPVTSNT-----INISFTSAPK---VETFHESIS
Pt_AtMYB4-like6 -----STLNSPPPP-DHQI-----LAFESRRRAE---IADFFQL--
Pt_AtMYB4-like4 -----NSTLSSPSVP-EHEI-----SPLQNPRTAD---IADFFQQ--
Pt_AtMYB4-like2 -----TSLSWSAP---DREF-----PAIQNLRTPE---ITDFFQH--
                : *

GbMYB1          SSHSELMAPANPMIESNIDRKLFSLVDDYLSVSTELSLGFSGMNCSVSKFS-----
Pt_AtMYB4-like1 SELSVESAQLSNAAGSLARDGQ---PD---LNLNLDLGLITVTCPSIHSEG-----
Pt_AtMYB4-like3 SELCGDSEQVSDAASELARDE---PSTLNLNLELSINWASMHVAVKEEP-----
Pt_AtMYB4-like5 -QTPGGTSSVLKVIAKNQDHDYD---KD---VNLDLSITLPSLCSSQSSSSRELSSGI
AtMYB4         FPGKSEKISMLTFKEKDECPVQEKFPD---LNLELRISLPDDVDRLQGHG---KSTT
Pt_AtMYB4-like6 --EGLKSPIESAASTDEEHPC---PD---INLDLCMGLSSNSAPA-----
Pt_AtMYB4-like4 --DRSERSPVENAACKEEH---PD---LNLDLCISLPSNSTLAAN-----
Pt_AtMYB4-like2 --NRSESPILPAAPDAEED---PD---LNLNLCISLPSNSSPAANTA---QSV
                :. :* :.

                EAR - suppression domain

GbMYB1          -TNSHNLYLMGSSLSNTDHHMPCGDQSVCRDQYRWMNT-----
Pt_AtMYB4-like1 -KQNVVNSEQGENDLGEGMYLAHSGECAPMLLLR-----
Pt_AtMYB4-like3 ILKSKPGEEEGACGRFDEKGYLFRYEECPVGKSLLR-----
Pt_AtMYB4-like5 RLSNDCTQODHKEKTCHIGLRTVGESCCSG--CWD-----
AtMYB4         PRCFKCSLGMINGMECRCGRMRCDVVGSSKGSDMSNGFDFLGLAKKETTSLLGRSLEM
Pt_AtMYB4-like6 -----
Pt_AtMYB4-like4 -RAMDANSNSGLGVWCH-TGPQINSDPRCENRYCERNSETELDSSSGSIHGILDLQLSAL
Pt_AtMYB4-like2 RKTVDSNLNSGSEVCPVPLQINYGKYCDSGYCQNASCFSQFRLVL-----

GbMYB1          ---
Pt_AtMYB4-like1 ---
Pt_AtMYB4-like3 ---
Pt_AtMYB4-like5 ---
AtMYB4         K---
Pt_AtMYB4-like6 ---
Pt_AtMYB4-like4 GVQ
Pt_AtMYB4-like2 ---

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R2 – DNA binding domain is highlighted in yellow.

R3 – DNA binding domain is highlighted in green.

bHLH binding motif – Indicated by red box.

C1 motif – Highlighted in pink.

EAR – Suppression domain is highlighted in light blue (which comprises part of the C2 motif).

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.

Zinc-finger motif – Highlighted in dark blue (C3 motif).

C4 motif – Highlighted in grey. The **GY/FDFLGI** motif is indicated by black box.