

Table S3. Summary of functionally characterized R2R3-MYB genes from plants examined in this study by MYB subgroups

Subgroup	Reported Members	Biological Functions	References
G1	AtMYB30, AtMYB60, AtMYB96, TaMYB1	Abiotic stress response/HR response, SA-mediated (VLC-Lipid metabolism); Development/Hypocotyle elongation, brassinosteroid pathway; Biotic stress response/Drought, ABA-mediated (stomatal closure), and pathogens ABA-and JA-mediated	1-5
G2	AtMYB13, AtMYB15, NtMYB1, TaMYB32	Abiotic stress response/Drought, light, wounding, salt, and Cold, ABA-mediated, disease resistance,	6-9
G3	AtMYB58, AtMYB63, AtMYB72, Zm1	Phenylpropanoide pathway/Lignin biosynthesis (fibers and vessels), Biotic stress response/Pathogens (induced systemic resistance)	10-12
G4	AtMYB3, AtMYB4, AtMYB7, AtMYB32, EgMYB1, TaMYB4, PhMYB4, HvMYB5, ZmMYB31, ZmMYB38, ZmMYB42, ZmMYB8	Phenylpropanoid pathway/sinapate ester biosynthesis, lignin biosynthesis, floral volatile benzenoid/phenylpropanoid (FVBP) biosynthesis, secondary cell wall formation	13-20
G5	AtMYB123, PL, C1, OSC1 PMYB134, DkMYB2	Proanthocyanidin biosynthesis, anthocyanin biosynthesis,	21-26
G6	AtMYB75, AtMYB90, AtMYB113, AtMYB114, IbMYB1, MdMYB10, PyMYB10, GhMYB10, ROSEA1, PhAn2, LeAN1, NtAn2, VvMYBA1, VvMYBA2, PHZ, BoMYB2	Anthocyanin biosynthesis	27-38
G7	AtMYB11, AtMYB12, AtMYB111, SIMYB12, SbY1, VvMYBF1, P1, P2, ZmMYB-IF25, ZmMYB-IF35, VvMYBPA1	Flavonol biosynthesis, anthocyanin biosynthesis, proanthocyanidin synthesis	39-49
G8	AtMYB85, PtMYB1, ODO1	Metabolism/Lignin deposition, cell wall thickening, fragrance biosynthesis	50-52
G9	AtMYB16, AtMYB17, AtMYB106, AmMYBL1, AmMYBL2, AmMYBL3, AmMIXTA	Cell fate/Conical epidermal cell outgrowth, richome branching	53-58
G11	AtMYB41, AtMYB102, DcMYB1	Abiotic stress response/Osmotic, ABA-mediated, elicitor treatment, UV-B irradiation and the dilution effect	59-61
G12	AtMYB28, AtMYB29, AtMYB34, AtMYB51, AtMYB76, AtMYB122	Glucosinolate biosynthesis/Aliphatic pool and Indolic pool	62-65
G13	AtMYB61, HvMYB33, PtMYB8	Phenylpropanoide pathway/lignin biosynthesis, Mucilage deposition and extrusion, stomatal closure	66-68
G14	AtMYB37, AtMYB38, AtMYB68, AtMYB84, AtMYB80, SIBlind	Development/Axillary meristem regulation, lateral organ formation (shoot branching, GA-mediated), hypocotyl elongation, blue light-mediated, root elongation	69-73
G15	AtMYB0, AtMYB23, AtMYB66, GhMYB109	Cell fate/ Trichome initiation and branching, and Root hair patterning, elongating fibers	74-79
G16	AtMYB18	Hypocotyl elongation, far red light-mediated (phytochrome signalling)	80
G18	AtMYB33, AtMYB65, AtMYB101, OsGAMYB, HvGAMYB, LtGAMYB	Stamen development/Anther development (tapetum); Abiotic stress response/ABA-, gibberellin-mediated; impair alpha-amylase expression in aleurone and flower development	81-92
G19	AtMYB21, AtMYB24, AtMYB57, PsMYB26	Stamen development/Filament length, GA- and JA-mediated, dehiscence process, phenylpropanoid metabolism	93-95
G20	AtMYB2, AtMYB62, AtMYB108, TaPIMP1	Abiotic stress response/Drought, salt, wounding, pathogens, ABA-, JA-, and GA-mediated, phosphate starvation; Stamen development/pollen maturation; dehiscence process	96-99
G21	AtMYB52, AtMYB54, AtMYB69, AtMYB105, AtMYB117, PttMYB21a	Metabolism/Cell wall thickening (fibers); axillary meristem regulation/lateral organ formation; vascular tissue formation and lignification	100-102
G22	AtMYB44, AtMYB70, AtMYB73, AtMYB77	Abiotic stress response/Drought, salt, cold, light, wounding; ABA-mediated (stomatal closure); growth regulation, auxin-mediated	103-105
G25	AtMYB115, AtMYB118	Embryogenesis/seed maturation	106
G28	AtMYB5, VvMYB5a, VvMYB5b, VvMYBPA1	Phenylpropanoide pathway/Proanthocyanindins biosynthesis; Mucilage biosynthesis;	107-112
G29	AtMYB26	Stamen development /Anther development (endothecium)	113
G30	AtMYB103	Cell wall thickening (fibers)	50, 112
G31	AtMYB46, PtMYB4, EdMYB2	Cell wall thickening (fibers and vessels), lignification	114-116
G33	AtMYB125	Stamen development, pollen formation	117
G34	AtMYB91, ZmRS2, TaWRS2, AmPHAN, LePHAN	Axillary meristem regulation/Lateral organ separation (Leaves)	118-122
G37	AtMYB88, AtMYB124	Cell fate/Stomata cell differentiation	123

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