

Supporting Information

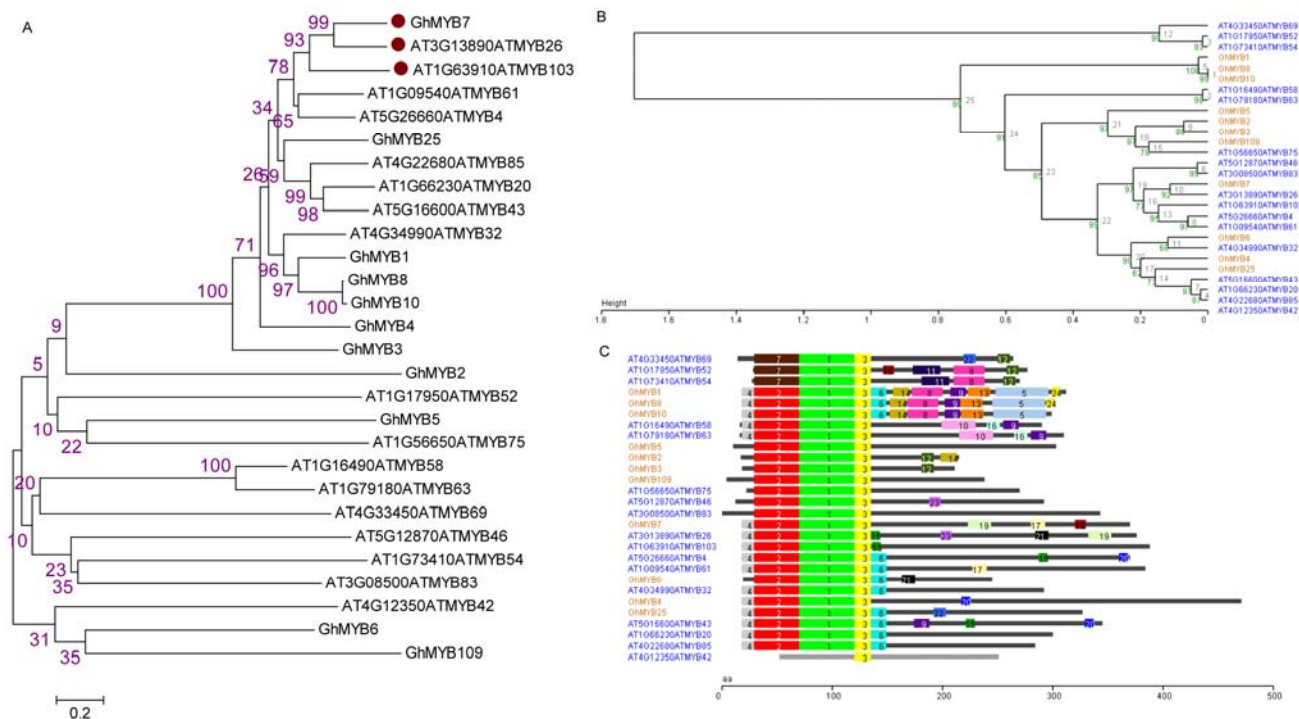


Figure S1. Phylogenetic analysis of GhMYB7 with secondary wall related *Arabidopsis* MYB proteins.

A, Phylogenetic tree of GhMYB7 with *Arabidopsis* secondary wall-associated MYBs. B, SALAD dendrogram using proteins from figure S1A. C, Motif structure comparison using interactive SALAD analysis (http://salad.dna.affrc.go.jp/CGViewer/en/cgv_upload.html).

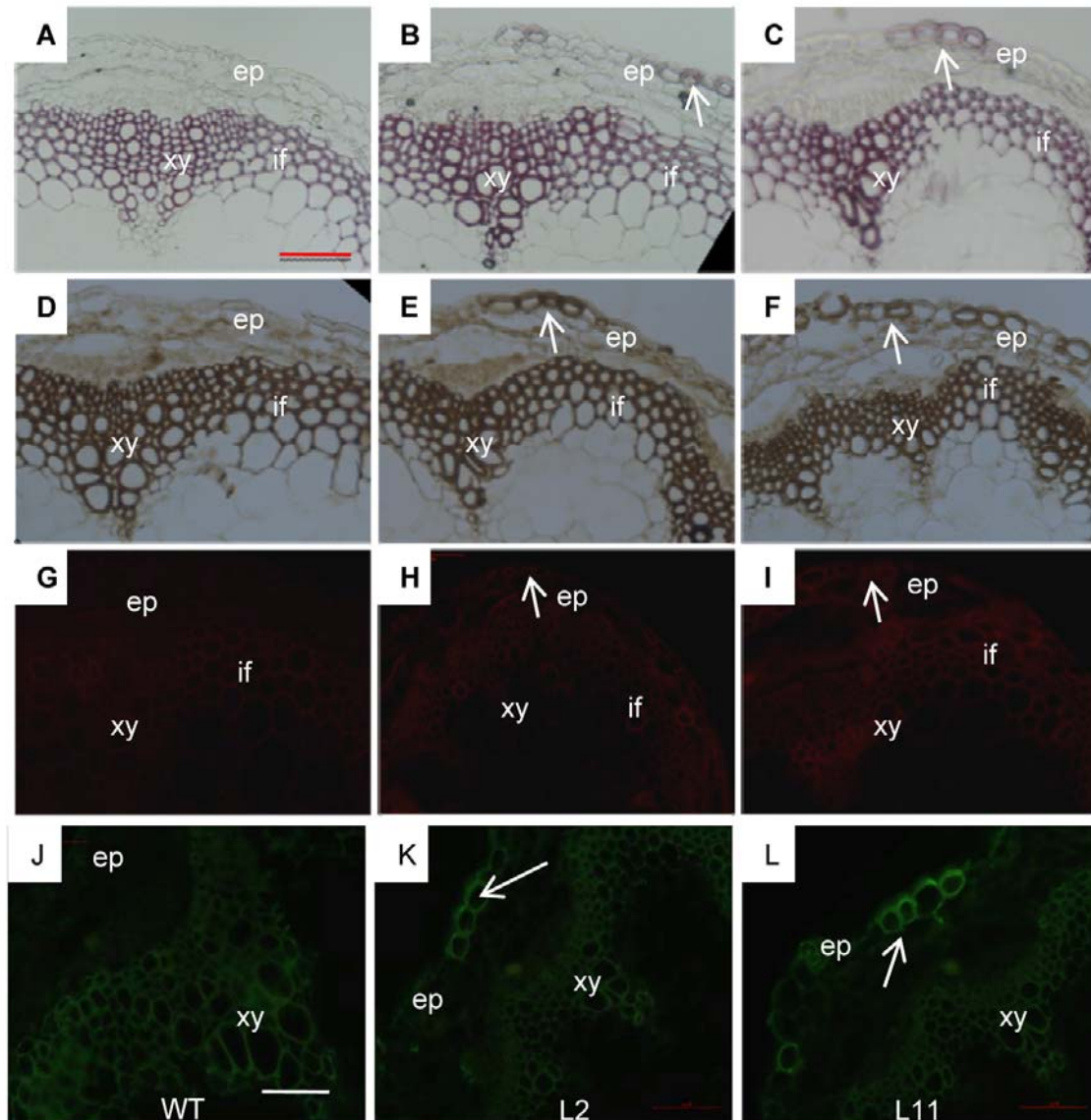


Figure S2. *GhMYB7* Overexpression causes ectopic deposition of secondary cell wall components in stem epidermal cells of transgenic Arabidopsis.

A-C, Phloroglucinol staining of stem paraffin-embedded cross-sections. D-F, Maule staining of stem cross-sections. Arrows denote ectopic lignin deposition. G-I, Cross sections stained with S4B. J-L, Labelling for cellulose using CBM3a. arrows denote ectopic deposition of cellulose. Xy, Xylem; if, interfascicular fibers; Co, cortex; Ep, epidermis. Bars=50 μ m. WT, wild type; L2 and L11, *GhMYB7* overexpression transgenic lines.

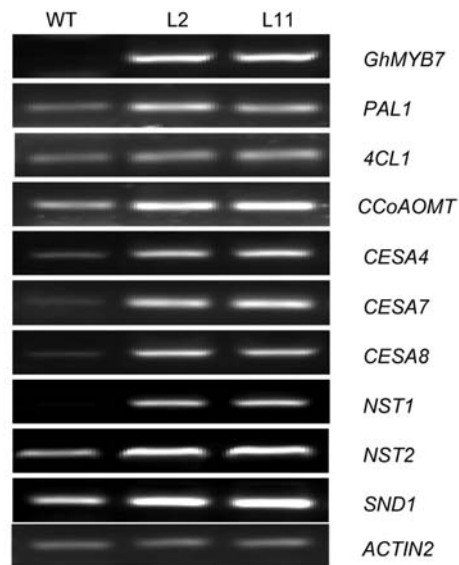


Figure S3. RT-PCR analysis of expression of the genes related to secondary cell wall biosynthesis in *GhMYB7* transgenic *Arabidopsis*.

Total RNA was isolated from four-week-old seedlings of transgenic plants and the wild type. AtACTIN2 was used as standard control. WT, wild type; L2 and L11, *GhMYB7* overexpression transgenic lines.