



**Fig. S9: RAxML-Phylogeny of AGL15-like MADS-box genes.**

Gene names of genes from species not belonging to gymnosperms are colored in grey. Gene names of genes from gymnosperms are as shown in Table 1 and Supplementary Data Table S1. Gymnosperm genes for which the name ends with “\_G” are solely derived from genomic data and no expression evidence was found. Gene names starting with AT, *Arabidopsis thaliana*; Am.tr., *Amborella trichopoda*; Os, *Oryza sativa*; PtMADS, *Populus trichocarpa*; Vv, *Vitis vinifera*. The numbers at the nodes represent bootstrap values.



**Fig. S10: RAxML-Phylogeny of AGL17-like MADS-box genes.**

Gene names of genes from species not belonging to gymnosperms are colored in grey. Gene names of genes from gymnosperms are as shown in Table 1 and Supplementary Data Table S1. Gymnosperm genes for which the name ends with “\_G” are solely derived from genomic data and no expression evidence was found. Gene names starting with AT, Arabidopsis thaliana; Am.tr., Amborella trichopoda; Os, Oryza sativa; PtMADS, Populus trichocarpa; Vv, Vitis vinifera. The numbers at the nodes represent bootstrap values.