



**Figure S6: Examples of functional characterization of cloned R2R3-MYB open reading frames (ORFs).** (A) Transient expression assays: green fluorescent protein (GFP) intensity was measured in *Physcomitrella patens* protoplasts co-transfected with *proBAN76:35Smini:GFP* alone (negative control) or together with AtTT8, AtTTG1 and AtTT2. TT2 is a key transcriptional regulator of proanthocyanidin (PA) biosynthesis (flavonoid) in seeds. TT2, together with TT8/bHLH042 and TTG1 (TRANSPARENT TESTA GLABRA 1, a WD repeat containing protein) form a ternary protein complex that specifically regulates the expression of genes involved in this pathway, such as *BANYULS*. The origin of AtTT2 being from either a previous study (grey bars, Thévenin *et al.*, 2012) that corresponds to the positive control or cloned within the frame of this study (black bars). Error bars  $\pm$  SE. *t*-test significance: \*\*\*,  $P < 0.001$ . none: promoter alone (B-C) *Arabidopsis thaliana* mutant complementation experiments: (B) *myb5 tt2 transparent testa* phenotype (*i.e.* yellow seeds deprived of PAs) was complemented by expressing *TT2/AtMYB123* or *AtMYB5* under the control of the *TT8* promoter as previously described (Xu *et al.*, 2013), (C) *gl1-1* lack of trichomes was reverted by overexpressing *GL1* (*GLABRA1/AtMYB0*) and *WER* (*WEREWOLF/AtMYB66*) ORFs (encoding functional homologues) as previously described (Lee and Schiefelbein, 2001).