

**Figure S1.** Developmental stages of asymbiotic seed germination of *Dendrobium chrysotoxum*. (a) Stage 1 Embryo (Em) swollen; (b) stage 2 Embryo enlargement and testa (T) ruptured; (c) Stage 3 appearance of cotyledon (Co) and rhizoids (Rh); (d) Stage 4 continued elongation of cotyledon (Co); (e-f) Stage 5, appearance of the first (FL) and root (R); (g-i) Stage 6 plantlet with cotyledon (Co), true leaves and root. FL: First leaf; SL: Second leaf.

