For germination, seeds were scarified and surface sterilized by immersion in concentrated sulfuric acid for 8 min, rinsed in deionized water five times and approximately 10 seeds were spread on 0.8 % (w/v) Agar TC-6 (Funakoshi, Tokyo, Japan) in petri plates (10 x 100 mm). The plates were wrapped with parafilm and aluminum foil and seeds were vernalized by incubating them at 4 °C. After two weeks of cold treatment, germinated seeds were transferred to soil-filled pots (8 cm diameter). Plants were grown in glasshouse conditions under 14-h day lengths with a light intensity of 30-40 μmol m^{-2} s^{-1} and a temperature range of 22-25 °C.

For genetic cross, artificial hybridization was performed. Immature buds were emasculated 1-2 d before flowers fully opened. Specifically, a cut was made in the middle of the standard petal between the sepals and the tip of the bud on the concave side. Using fine tweezers, the standard petal was opened and folded back, starting from the middle portion up towards tip. The wing petals were then pried apart and folded. This exposed the staminal bundle surrounding the style with the anthers at the top of the bundle surrounding the stigma. Pollen grains were applied to the stigma just after removing the anthers. A success in the cross was confirmed by a nuclear CAPS marker.