**Additional file 2.** Effect of cold treatment on $F_v/F_m$ in the *jar1-1* (A and C) and *coi1-16* (B and D) mutants and their respective wild types, Col-0 and Col-*gl*. The plants were grown on agar plates without sucrose (A and B) or with addition of 55 mM sucrose (C and D). $F_v/F_m$ was determined for the whole rosette by fluorescence imaging. The plates were incubated at 20°C until day 13 and then either kept at 20°C (red symbols) or transferred to 4°C (blue symbols) for the remainder of the experiment. Data are means of 5 plates ±SE.