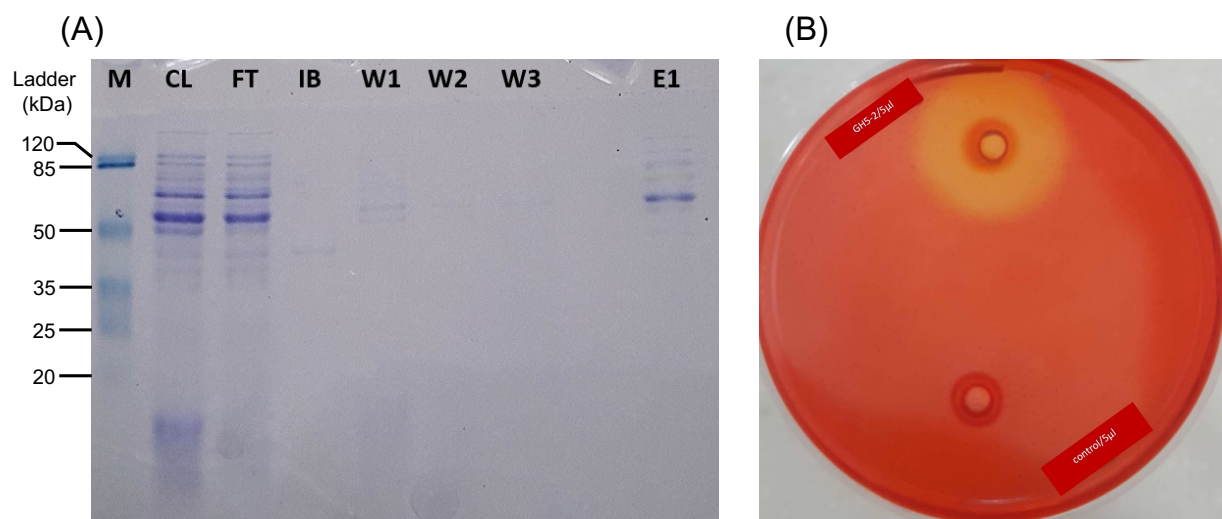
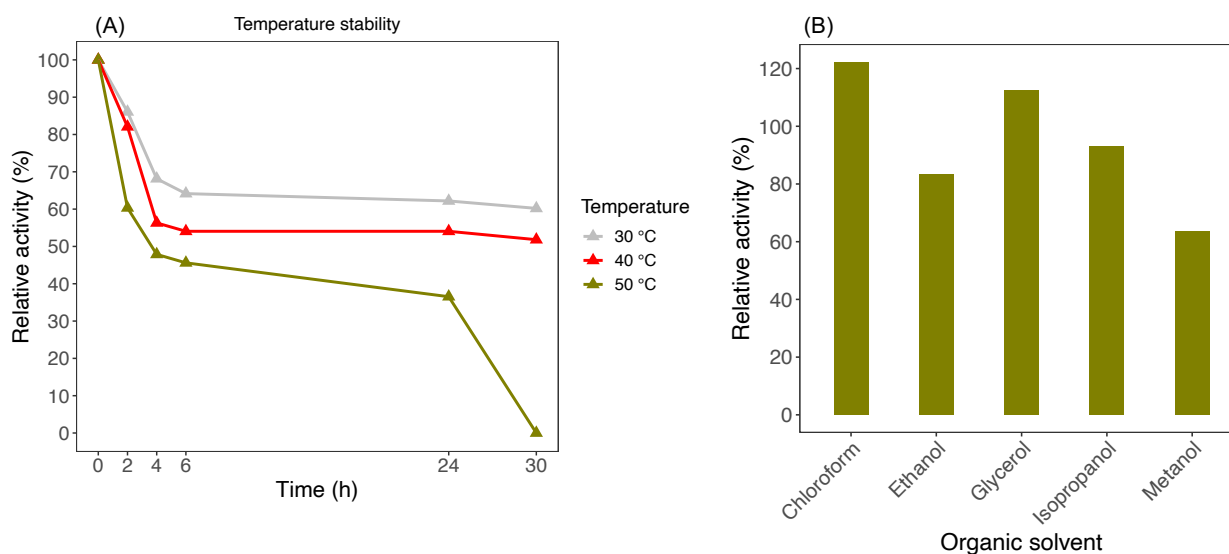




**Fig. S1: Purification and plate assay of the recombinant Celcm05-2 cellulase enzyme.** (A) SDS-PAGE analysis shows the crude cell lysate and the purified enzyme fractions. M, protein size marker (Thermo Scientific, Cat No: 26612); CL: clear lysate; FT: flow-through; IB: inclusion body; W1-3: wash 1-3; E1: protein elute 1. (B) Celcm05-2 activity on an agar plate with 0.1% CMC as substrate. The total protein concentration in the extract was 480  $\mu\text{g/mL}$ .



**Fig. S2: The effect of long-term storage and organic solvents on Celcm05-2 activity.** (A) the CMCase activity of the enzyme under optimal temperature (40 °C) and 10 °C below and 10 °C above the optimum temperature. The CMCase activity of Celcm05-2 was measured under standard conditions — citrate buffer pH = 3. (B) The CMCase activity in the

presence of a 30% (v/v) concentration of certain organic solvents was measured under standard conditions.