Supplementary Materials: A new homo-hexamer Mn-containing catalase from *Geobacillus* sp. WCH70

Hai-Chao Li [1], Qing Yu [1], Hui Wang [1], Xin-Yu Cao [1], Li Ma [1,2,*] and Zheng-Qiang Li [1,*]

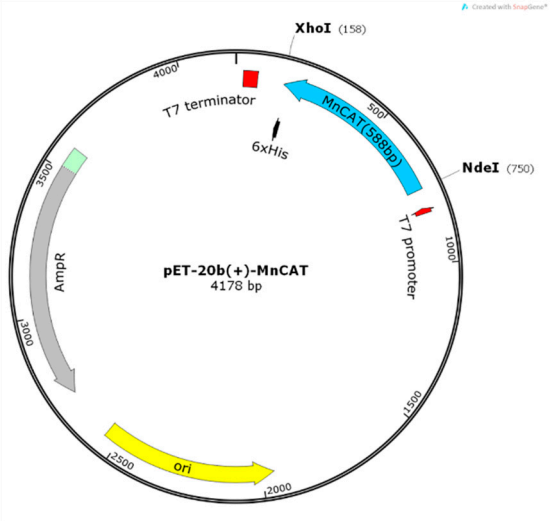

Figure S1. Recombinant plasmid of pET20b-MnCAT map. The Mn-catalase gene is inserted into an expression vector pET20b (blue) with 6×His tag (black). T7 promoter and terminator are marked in red. AmpR sequence (confers resistance to ampicillin, carbenicillin, and related antibiotics) and ori sequence (origin of replication) are marked in gray and yellow respectively. The restriction enzyme sites are Nde I and Xho I. The map is created with SnapGene® 2.3.2.

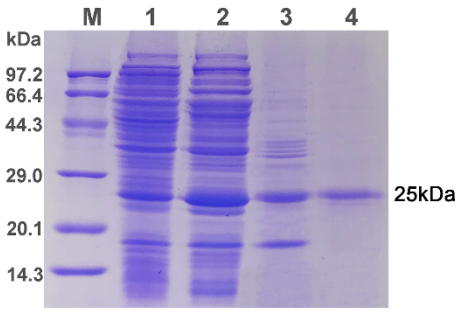

Figure S2. Coomassie-blue stained SDS-PAGE gel profile (15%) at different GWC purification steps. Lane M, molecular mass protein marker (14.3-97.2 kDa); Lane 1, supernatant of the cell lysate treated by ultrasound; Lane 2, supernatant after the first heat treatment; Lane 3, the elution from Ni-NTA Agarose column by 20 mM Tris-HCl with 100 mM imidazole; Lane 4, supernatant after the second heat treatment. The gel contains total protein amount of 20, 20, 5 and 3 μg, respectively, on lane 1, 2, 3, and 4.

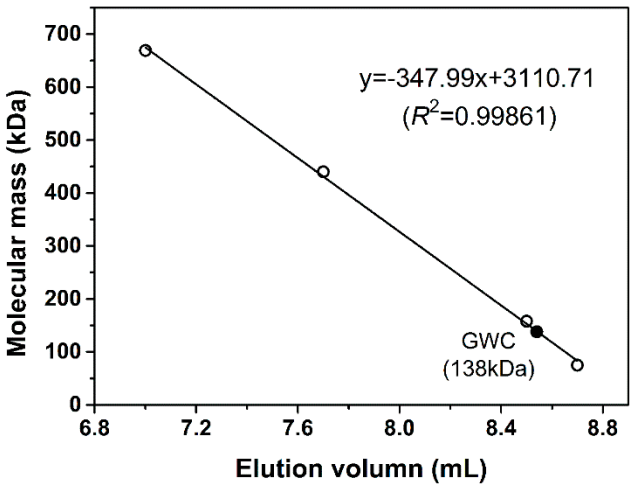

Figure S3. Gel filtration analysis of purified GWC. The standard proteins are conalbumin (75 kDa), aldolase (158 kDa), ferritin (440 kDa) and thyroglobulin (669 kDa). The estimated molecular mass of GWC is 138 kDa.