



Additional Figure 1 The mechanism of hydrogen bubbles to exert antioxidant activity in the living cells.

Note: A schematic illustration is hypothetically proposed for how hydrogen bubbles exert antioxidant activity in living cells, based on data in the present study. Because hydrogen molecules are amphipathic, the bubbles are smaller than one hundredth of the average cell size and contain plentiful H₂ molecules; therefore, they can pass through the cell membrane easily and scavenge excess amounts of reactive oxygen species (ROS).