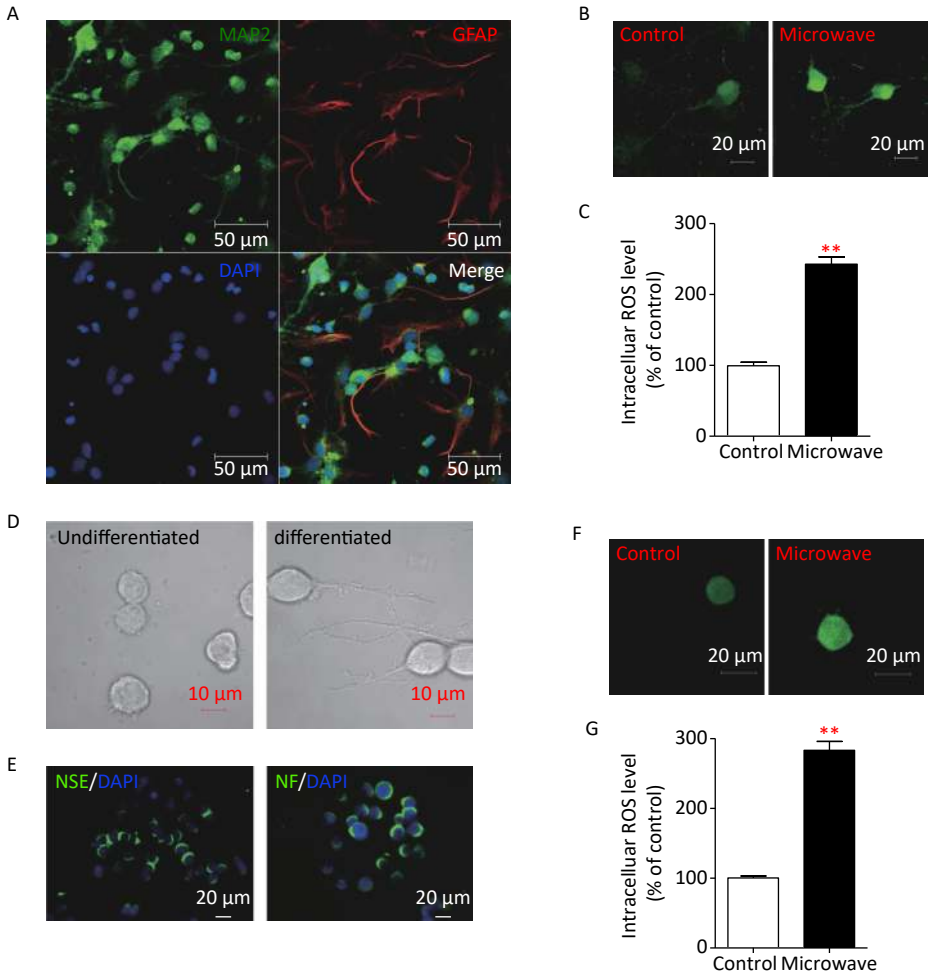
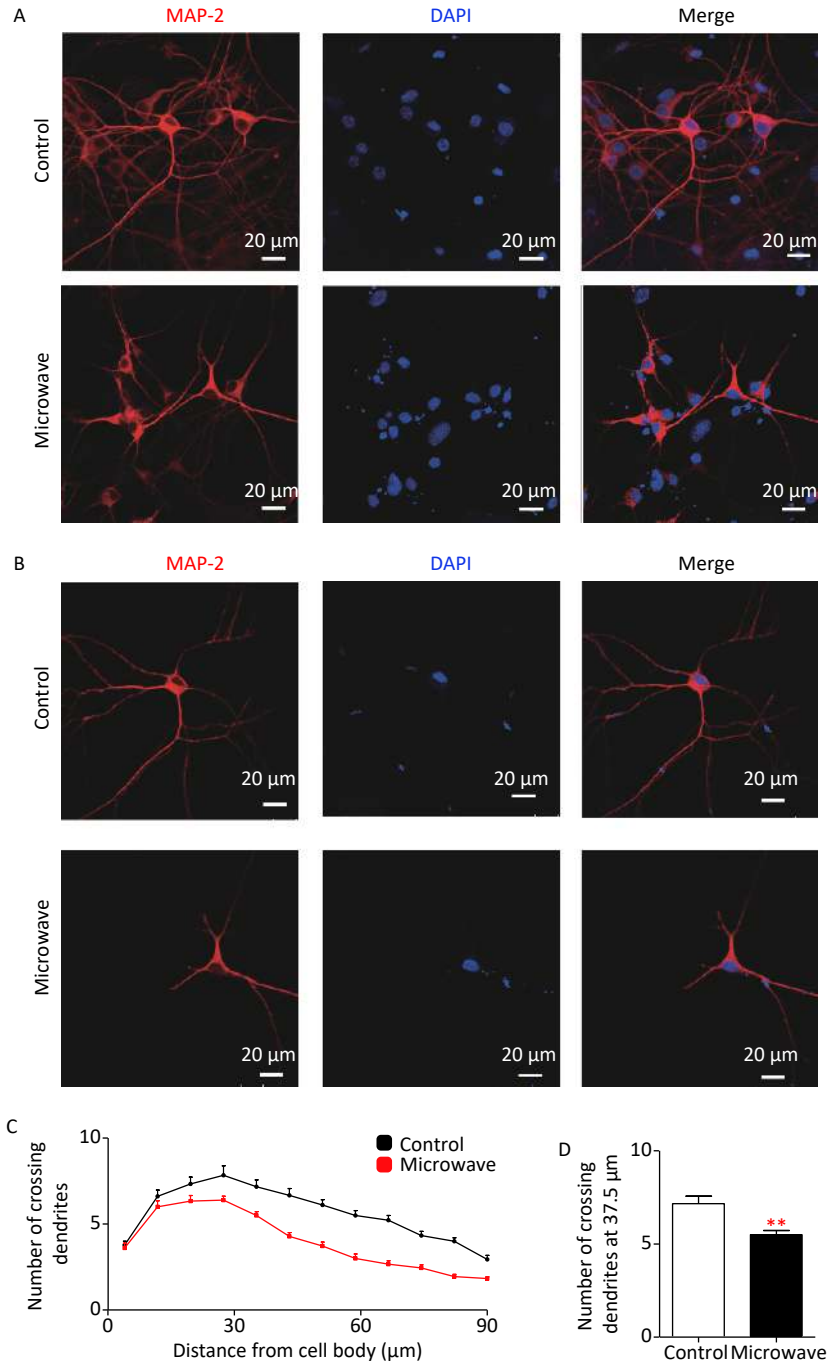
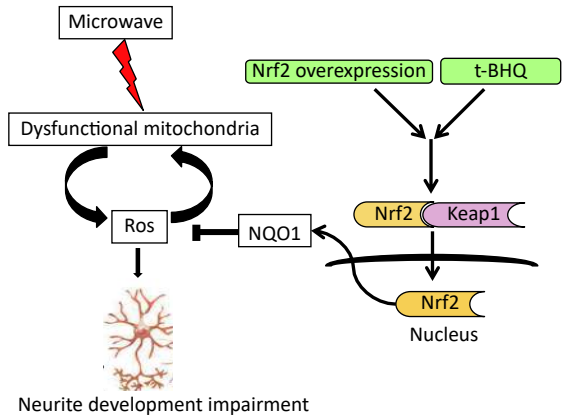


Supplementary Figure S1. Microwave exposure increases levels of intracellular ROS in primary cultured rat hippocampal neurons and differentiated PC12 cells. (A) Immunostaining of DIV7 neurons (MAP2, green) and glial cells (GFAP, red) cultured without arabinofuranoside. Scale bar, 50 μm. (B) Hippocampal neurons were exposed at 30 mW/cm^2 or sham exposures for 6 min at DIV7, and incubated with DCFH-DA for 30 min. Fluorescence images of neurons loaded with DCFH-DA were shown. Scale bars, 20 μm. (C) Intracellular ROS was measured by fluorospectrophotometer. (D) Morphological changes of NGF-induced differentiated PC12 cells. Scale bars, 10 μm. (E) Identification of NGF-induced differentiated PC12 cells. Differentiated PC12 cells were immunostained using anti-NSE and anti-NF antibodies. Scale bars, 20 μm. (F) The differentiated PC12 cells were exposed at 30 mW/cm^2 or sham exposures for 6 min, and incubated with DCFH-DA for 30 min. Fluorescence images of cells loaded with DCFH-DA were shown. Scale bars, 20 μm. (G) Intracellular ROS was measured by fluorospectrophotometer. $^{*}P < 0.05$, $^{**}P < 0.01$, *vs*. control group.



Supplementary Figure S2. Impaired dendrite development in microwave exposed primary cultured rat hippocampal neurons. (A) Hippocampal neurons were exposed at 30 mW/cm^2 or shame exposure for 6 min at DIV7, then cultured, fixed at DIV14 and dendrites were immunostained using an anti-MAP2 antibody. Scale bars, 20 μm. (B) The typical image of the immunostaining. (C) Sholl analysis of microwave exposed neurons (red line, n = 18) or sham-exposed neurons (black line, n = 18). (D) Numbers of crossing dendrites at 37.5 μm from the cell body in exposed and sham-exposed neurons. $^{*}P < 0.05$, $^{**}P < 0.01$, *vs.* control group.



Supplementary Figure S3. Schematic representation of the role of Nrf2/NQO1 pathway in the protection of neuron injury induced by microwave.