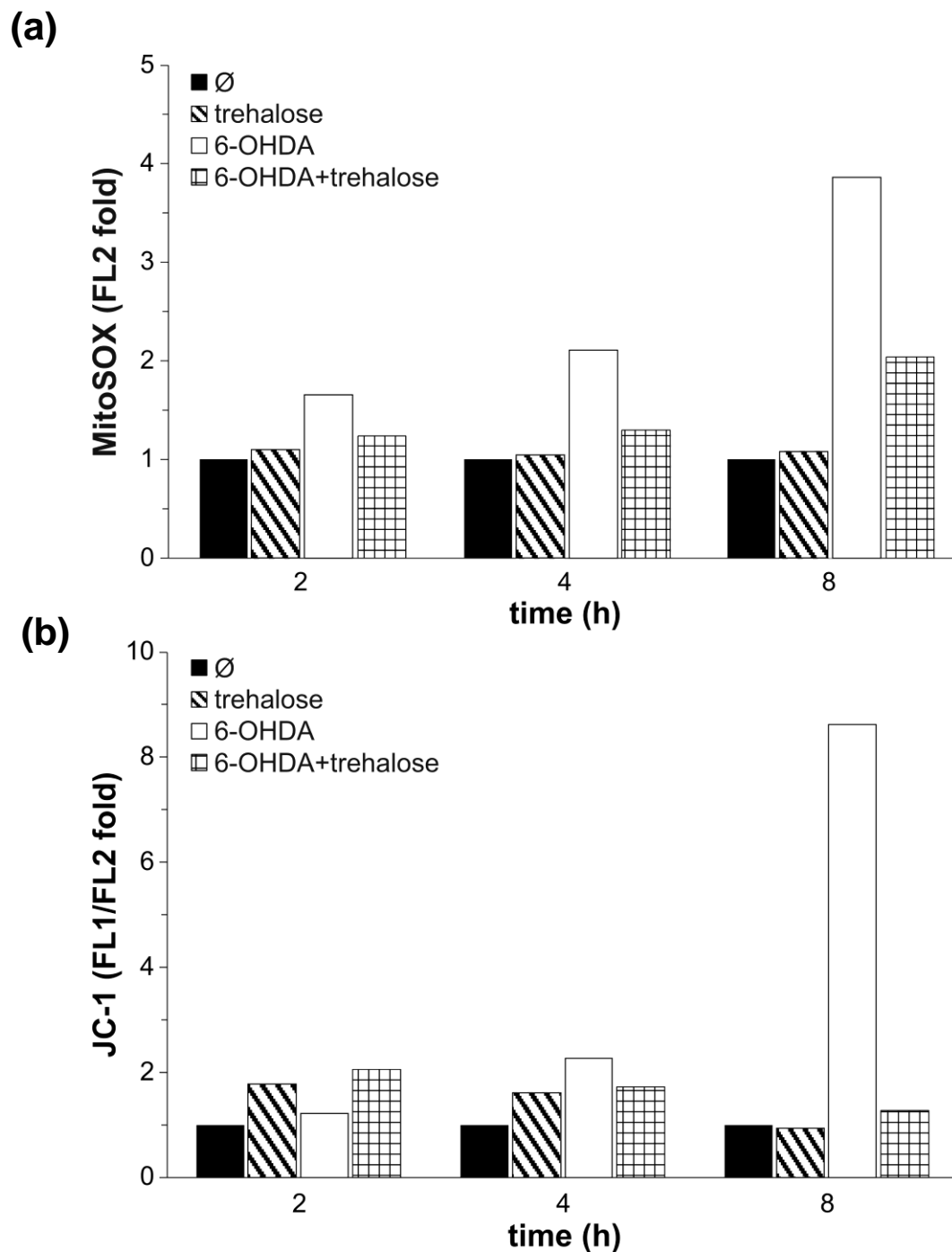
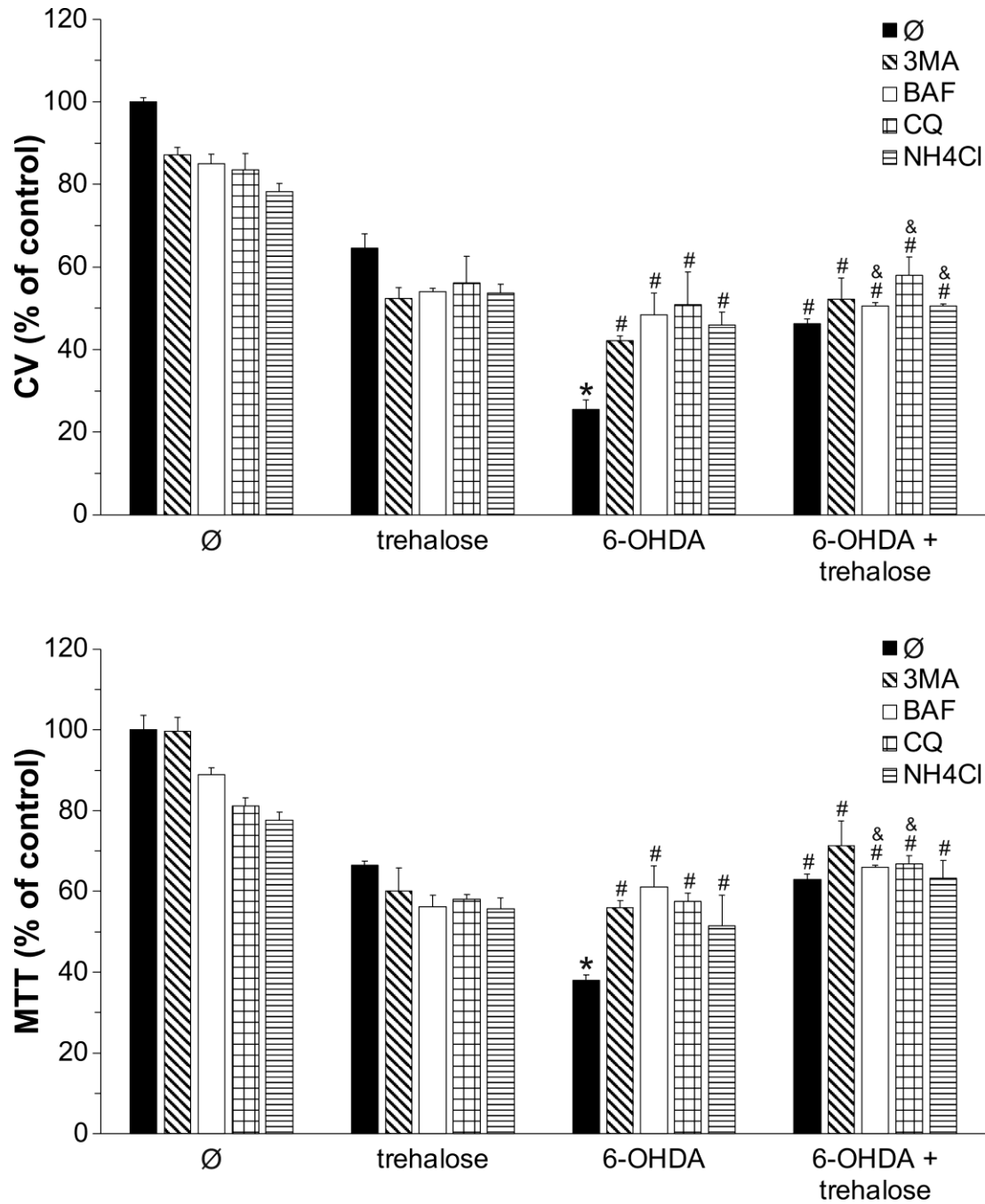


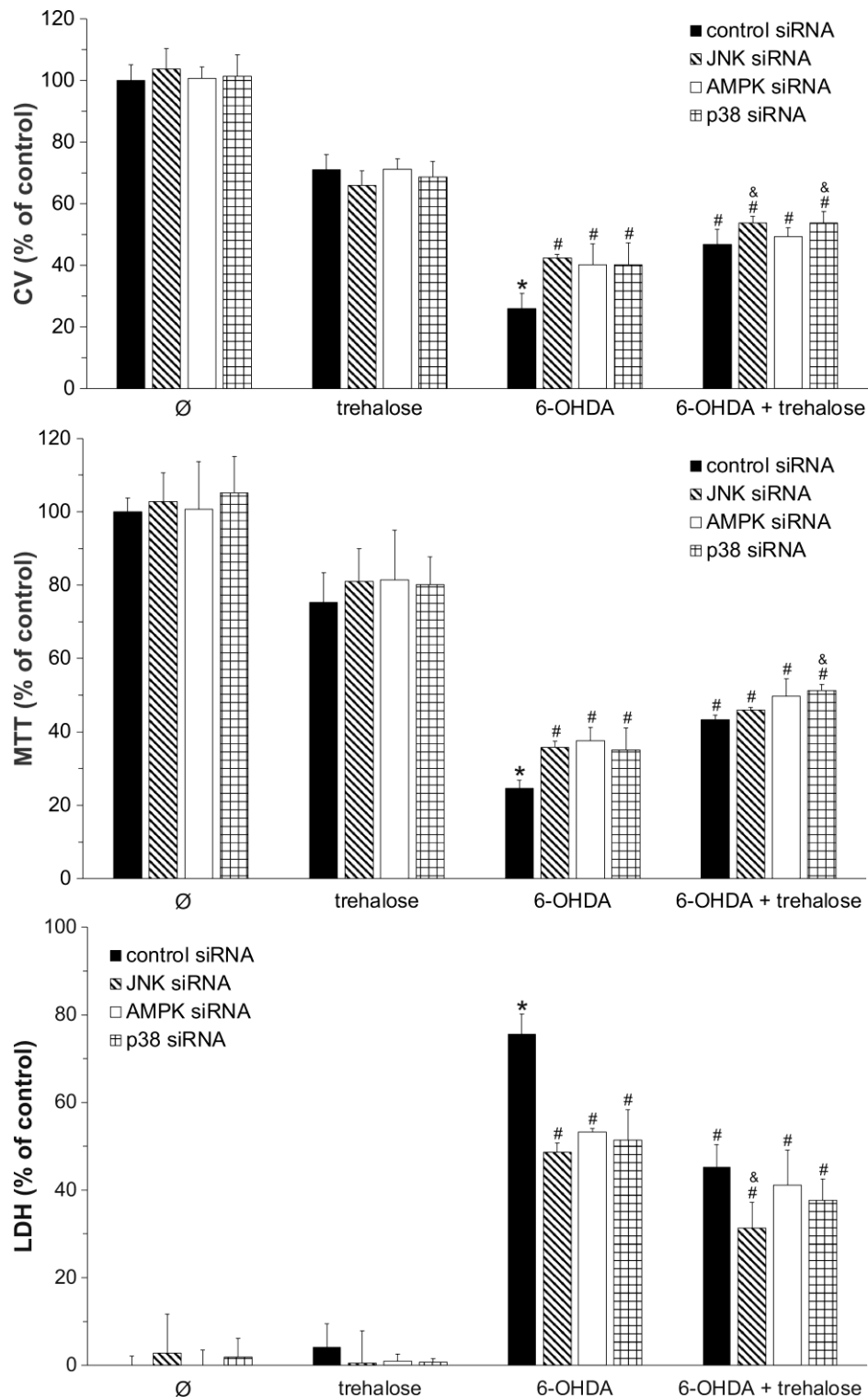
**Figure S1.** Trehalose induces cell cycle block in SH-SY5Y cells. SH-SY5Y cells were incubated with or without trehalose (50 or 100 mM) for 48 h, and the cell cycle phases in propidium iodide-stained cells were analyzed by flow cytometry. The results from a representative of three independent experiments are presented.



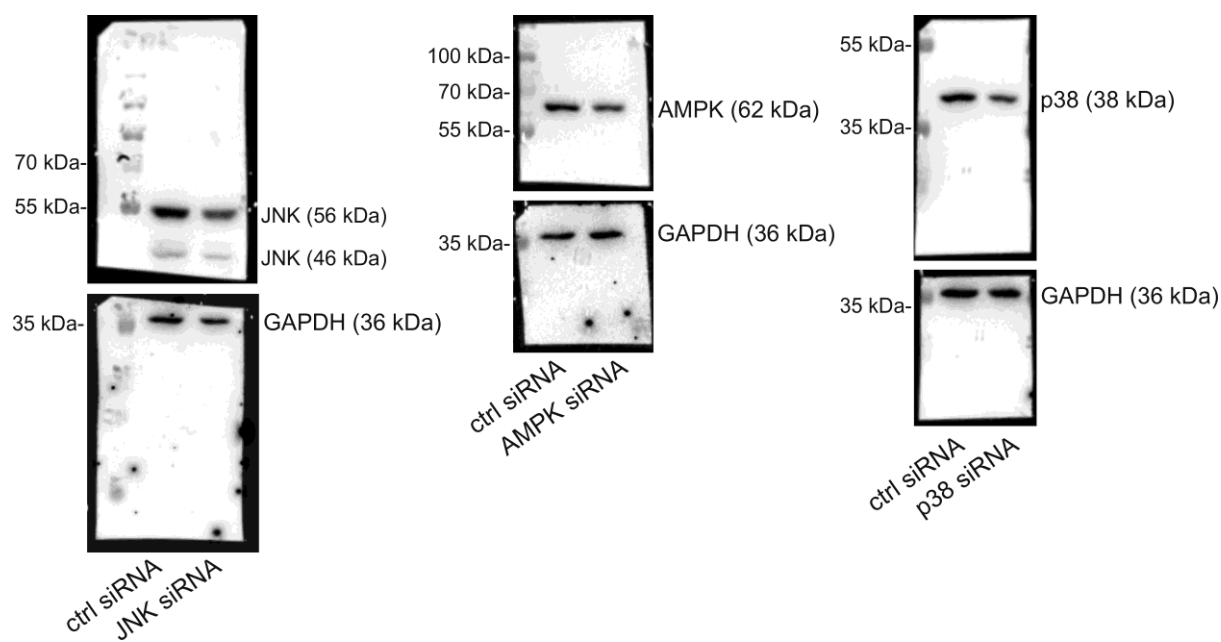
**Figure S2.** Trehalose prevents 6-OHDA-induced mitochondrial superoxide production and depolarization in SH-SY5Y cells. SH-SY5Y cells were incubated with or without trehalose (TRE; 100 mM) for 24 h and then exposed or not to 6-OHDA (60  $\mu$ M) for the indicated times. Mitochondrial superoxide production **(a)**, and mitochondrial depolarization **(b)** were determined by flow cytometric analysis of MitoSOX (FL2) and JC-1 (FL1/FL2) median fluorescence, respectively. The data from a representative of two independent experiments are shown.



**Figure S3.** Autophagy is not involved in trehalose-mediated protection from 6-OHDA. SH-SY5Y cells were incubated with or without trehalose (100 mM) for 24 h and then treated or not with 6-OHDA (60  $\mu$ M) for 24 h, in the presence or absence of 3-methyladenine (3MA; 4 mM), bafilomycin A1 (BAF; 10 nM), chloroquine (CQ; 20  $\mu$ M), or NH<sub>4</sub>Cl (10 mM). Cell viability was determined by crystal violet (CV) and MTT assays, and the cytotoxicity was evaluated by LDH release. The data are presented as mean  $\pm$  SD values of triplicates from a representative of three independent experiments (\* $p$  < 0.05 vs. no treatment; # $p$  < 0.05 vs. 6-OHDA; & $p$  < 0.05 vs. 6-OHDA + trehalose).



**Figure S4.** Inhibition of JNK, AMPK, and p38 MAPK is involved in trehalose-mediated protection from 6-OHDA. After transfection with control siRNA or siRNA against JNK, AMPK, or p38 MAPK, SH-SY5Y cells were incubated with or without trehalose (100 mM) for 24 h and then treated or not with 6-OHDA (60  $\mu$ M) for another 24 h. Cell numbers were determined by crystal violet (CV) and MTT assays, and the data are presented as mean  $\pm$  SD values of triplicates from a representative of three independent experiments (\* $p$  < 0.05 vs. control siRNA/no treatment; # $p$  < 0.05 vs. control siRNA/6-OHDA; & $p$  < 0.05 vs. control siRNA/6-OHDA + trehalose).



**Figure S5.** Original immunoblots confirming JNK, AMPK, and p38 MAPK downregulation by siRNA.