

**Table S1.** Primer sequences used for real-time PCR.

Gene	5'-Primer (F)	3'-Primer (R)
<i>β-Actin</i>	CTGCGGCATCCACGAAACT	AGGGCCGTGATCTCCTTCTG
<i>CuZnSOD</i> <sup>1</sup>	CAGGTCCTCACTTCAATCC	CCAAACGACTTCCASCAT
<i>MnSOD</i> <sup>2</sup>	GGACAAATCTGAGCCCTAACG	CCTTGTTGAAACCGAGCC
<i>GPx1</i> <sup>3</sup>	TGGGGAGATCCTGAATTG	GATAAACTTGGGGTCGGT
<i>GPx4</i> <sup>4</sup>	GATTCTGGCCTTCCCTTGC	TCCCCTTGGGCTGGACTTT
<i>BNIP3</i> <sup>5</sup>	GACTCGCCAGGTTACAGACA	CAGTGACGTGCTTAGGACCC
<i>BNIP3L</i> <sup>6</sup>	CCGGAGAACCAGAGACGGTA	GGGCAGAGACTGTTCACCTT
<i>FUNDC-1</i> <sup>7</sup>	GGCAGCACCTGAAATCAACA	GCCTAGCAAAAAGCCTCCCA

<sup>1</sup>*CuZnSOD* = Copper and zinc superoxide dismutase;

<sup>2</sup>*MnSOD* = Manganese-containing superoxide dismutase;

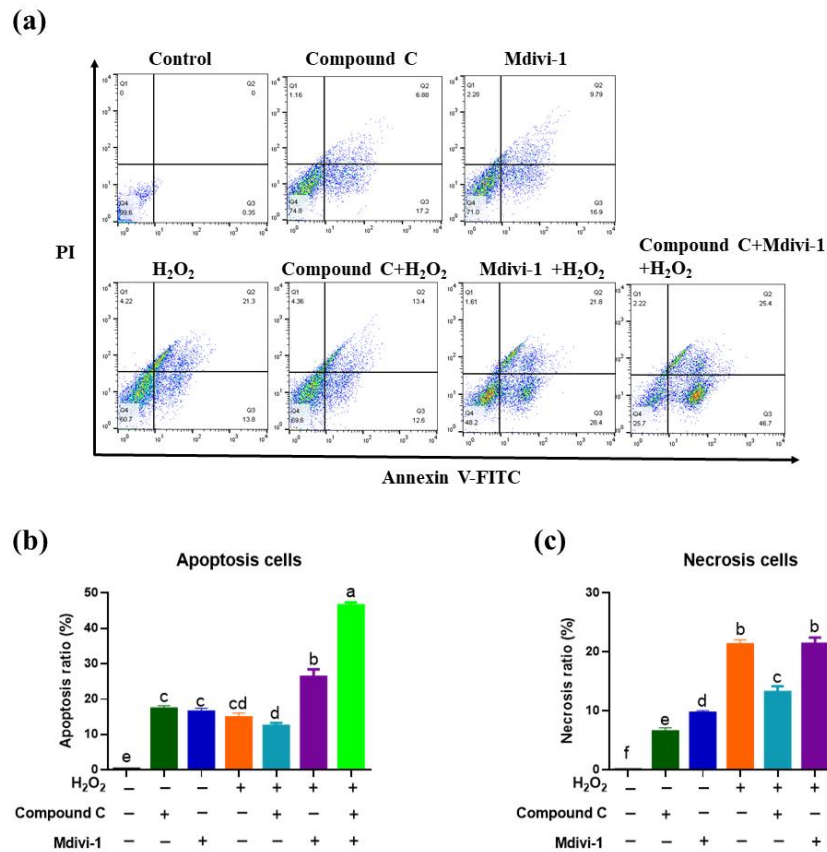
<sup>3</sup>*GPx1* = Glutathione peroxidase 1;

<sup>4</sup>*GPx4* = Glutathione peroxidase 4.

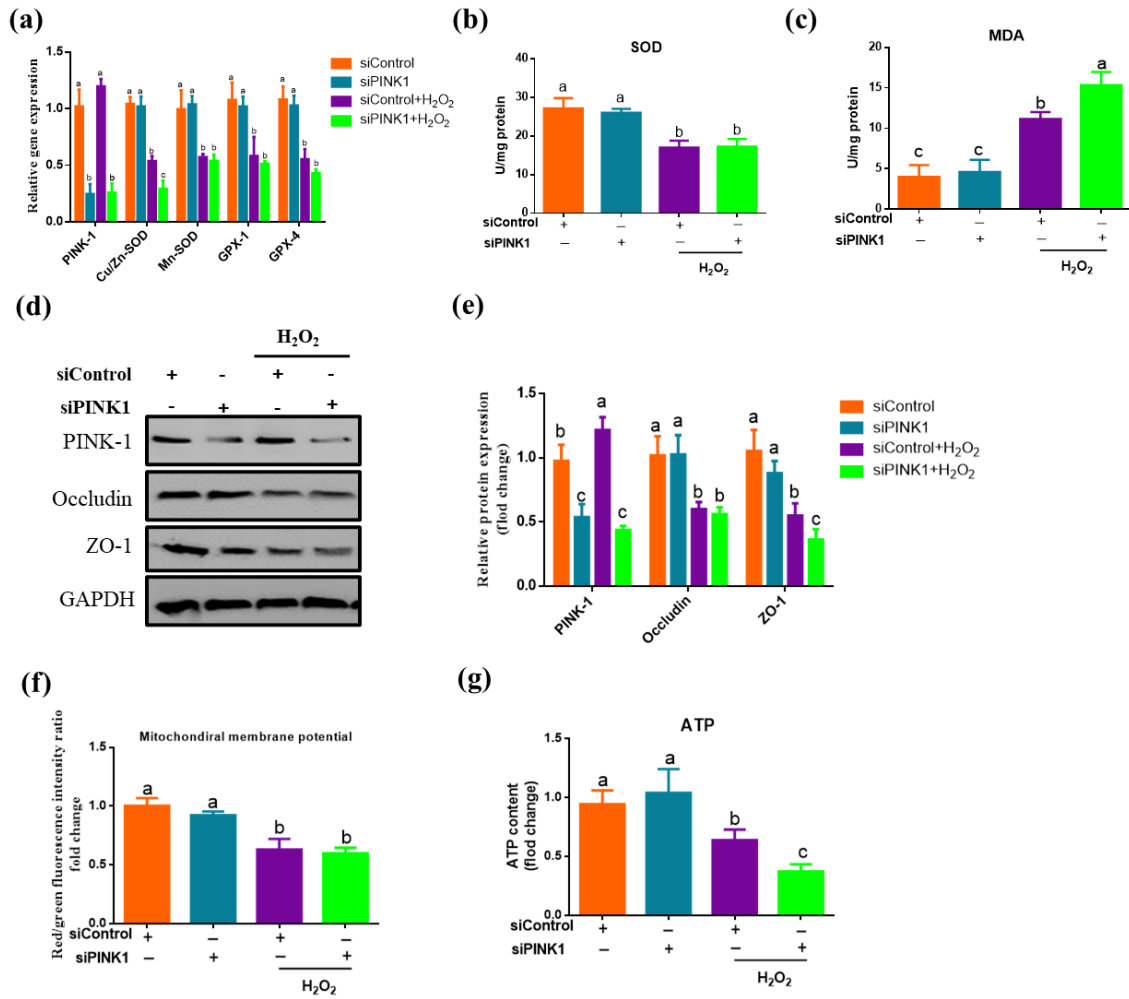
<sup>5</sup>*BNIP3* = BCL2/adenovirus E1B 19 kDa interacting protein 3

<sup>6</sup>*BNIP3L* = BCL2/adenovirus E1B 19 kDa interacting protein 3L

<sup>7</sup>*FUNDC-1* = FUN14 domain containing 1



**Figure S1.** The effect of inhibiting AMPK and mitophagy on the ratio of apoptosis and necrosis cells in H<sub>2</sub>O<sub>2</sub>-induced oxidative stress model of intestinal epithelial cells. **(a)** In the H<sub>2</sub>O<sub>2</sub>-induced IPEC-J2 cell oxidative stress model, the detection of apoptosis using Annexin V-FITC/PI staining and flow cytometry; **(b)** In the H<sub>2</sub>O<sub>2</sub>-induced IPEC-J2 cell oxidative stress model, the effect of inhibiting AMPK signal pathway and mitophagy on the ratio of apoptosis cells (Annexin V-FITC<sup>+</sup> PI<sup>-</sup>); **(c)** In the H<sub>2</sub>O<sub>2</sub>-induced IPEC-J2 cell oxidative stress model, the effect of inhibiting AMPK signal pathway and mitophagy on the on the ratio of necrosis cells (Annexin V-FITC<sup>+</sup> PI<sup>+</sup>). Data expressed as average  $\pm$  SD. <sup>a,b,c,d</sup> Means with different letters differ significantly ( $p < 0.05$ ).



**Figure S2.** The effects of knockdown of PINK1 in the H<sub>2</sub>O<sub>2</sub>-induced oxidative stress model of intestinal epithelial cells. (a) The expression of *Cu/Zn-SOD*, *Mn-SOD*, *GPX-1*, *GPX-4*; (b) SOD activity; (c) MDA level; (d) Western analysis of PINK1, Occludin and ZO-1 protein expression; (e) Relative expression of PINK1, Occludin and ZO-1; (f) ATP production; (g) mitochondrial membrane potential; Data expressed as average  $\pm$  SD. <sup>a,b,c</sup> Means with different letters differ significantly ( $p < 0.05$ ).