

## Supplementary Information

**Figure S1.** UVB irradiation induced p53 (Ser-15) and  $\gamma$ -H2AX phosphorylation in a dose-dependent manner in HaCaT keratinocytes. Cells were irradiated with various concentrations of UVB (0–20 mJ/cm<sup>2</sup>) for 12 h after being exposed to UVB. At 12 h after UVB irradiation, cells ( $2 \times 10^4$  cell/100  $\mu$ L) were fixed/stained to measure the levels of phosphoactive histone H2A.X ( $\gamma$ H2A.X; green) and phospho-p53 (serine 15) (red). Staining with Hoechst 33342 (blue) was performed to observe cell nuclei. Cells were imaged on the GE IN Cell Analyzer 1000 at 20 $\times$  objective magnification. Scar bar = 200  $\mu$ m. Data are mean  $\pm$  standard deviation of 3 independent experiments. <sup>¶</sup>  $p < 0.05$  compared with the unirradiated group, <sup>#</sup>  $p < 0.01$  compared with the unirradiated group.

