

Figure S1. KEGG pathway enrichment analysis of *Dispo- rum cantoniense* petroleum ether fraction-targeted proteins. The dot size represents the number of enriched genes (count), the color indicates the adjusted P-value and the x-axis denotes the gene ratio. KEGG, Kyoto Encyclopedia of Genes and Genomes.

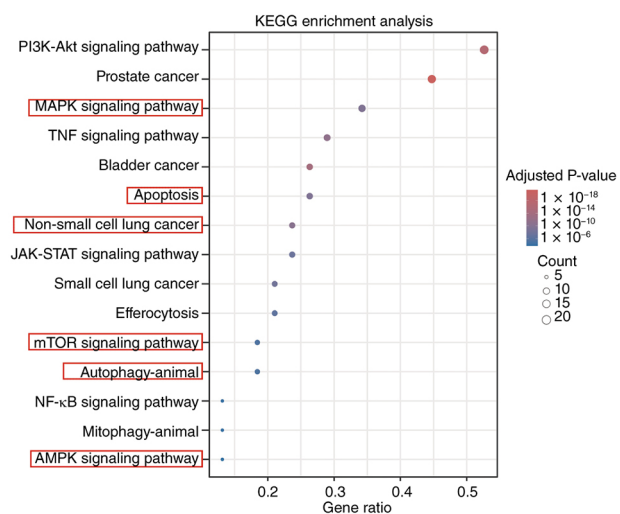


Figure S2. GO enrichment analysis of the potential biological processes regulated by *Disporum cantoniense* petroleum ether fraction targets. Dot size represents the number of genes enriched in each GO term (count), color indicates the adjusted P-value and the x-axis denotes the gene ratio. GO, Gene Ontology.

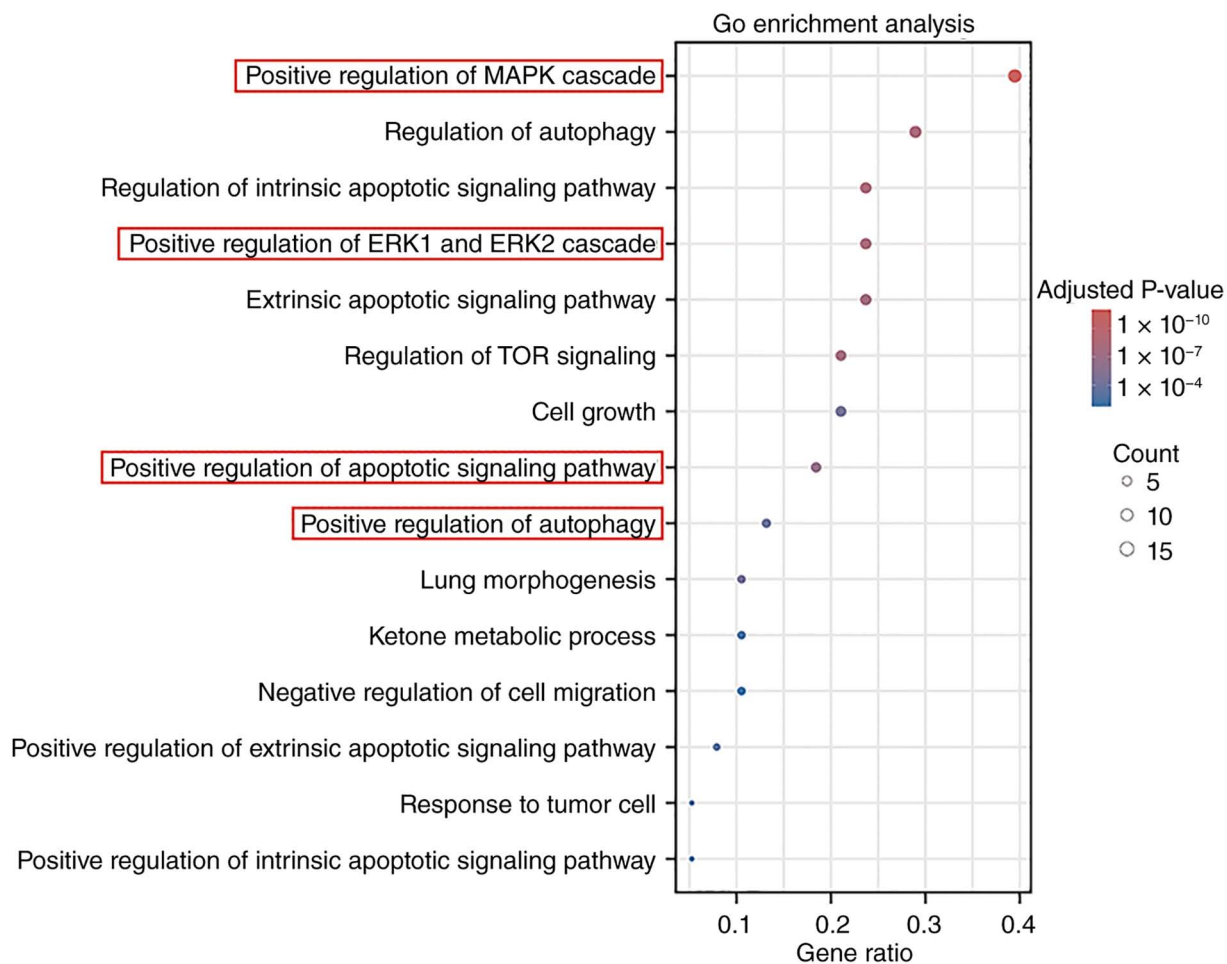


Figure S3. ULK101 attenuates DPF-induced autophagy in non-small cell lung cancer cells. (A) Western blotting analysis of LC3 protein expression in A549 and H1299 cells after DPF treatment in the presence or absence of ULK101. (B-C) Quantification of the LC3-II/LC3-I ratio in A549 and H1299 cells following the indicated treatments. Data are presented as the mean $\pm$ SD. Statistical significance is denoted as * P <0.05, ** P <0.01 and *** P <0.001. DPF, *Disporum cantoniense* petroleum ether fraction; Ctrl, vehicle.

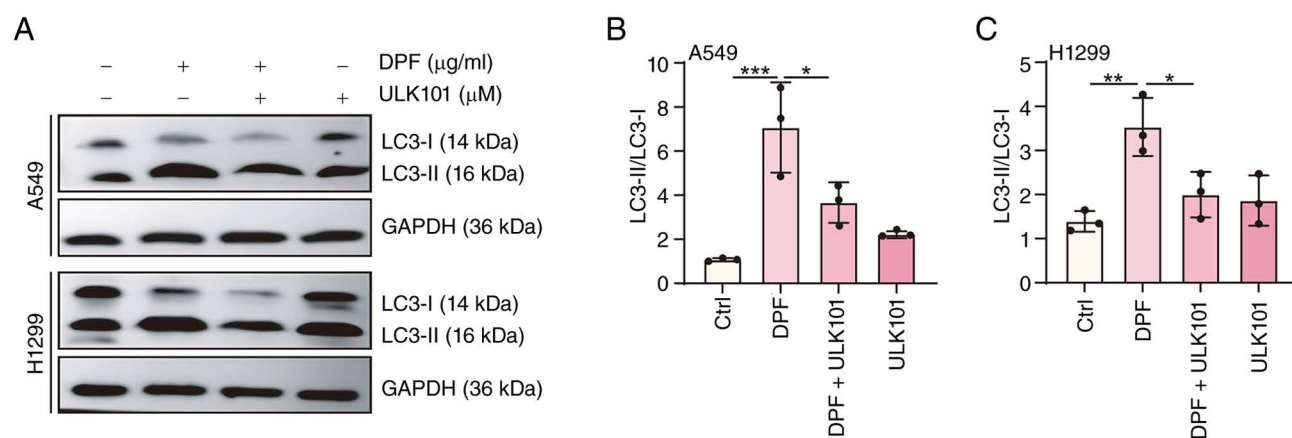


Figure S4. Molecular docking models of BBG-D with two target proteins. (A) Docking conformation of BBG-D (yellow) within the binding pocket of AMPK (PDB: 2H6D). (B) Docking conformation of BBG-D (yellow) within the binding pocket of MEK (PDB: 3E8N), showing stable interactions within the catalytic domain. PDB, Protein Data Bank; BBG-D, 2'- β -D-glucopyranosyloxybenzyl-6- α -L-(4'-O-acetyl)-rhamnopyranosyloxy-2-hydroxy-3-methoxybenzoate.

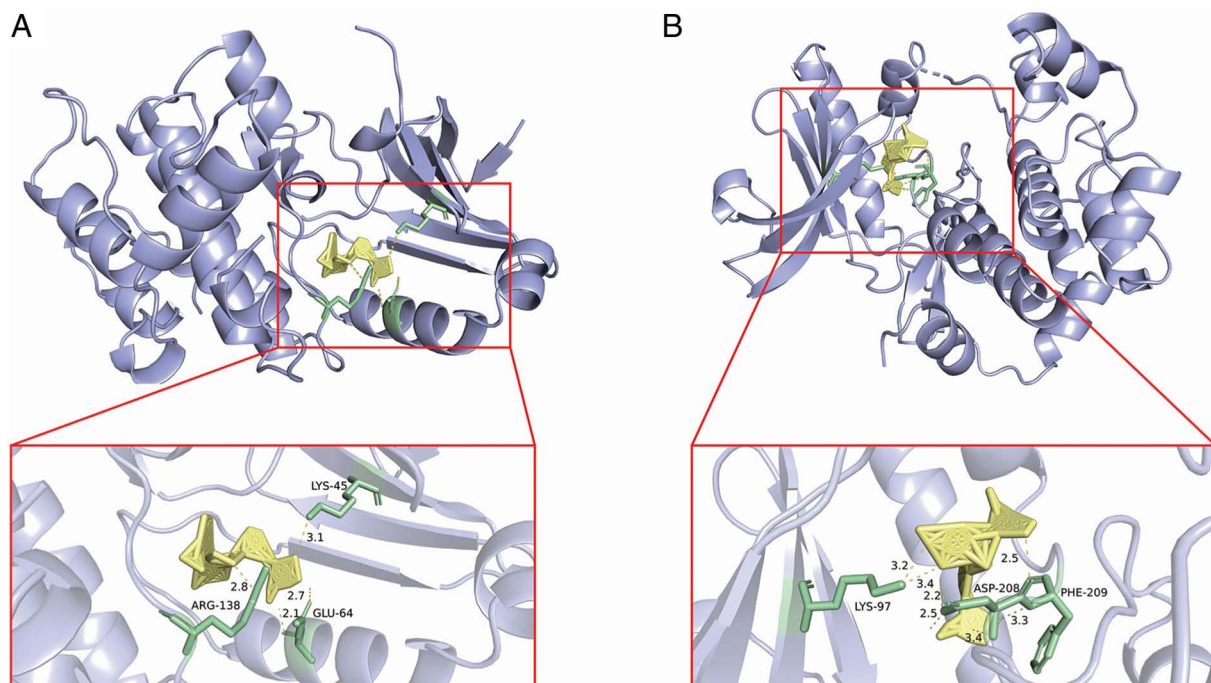


Figure S5. Cell viability of A549 cells treated with DPF in the presence or absence of ZVF. Data are presented as the mean $\pm$ SD. Statistical significance is denoted as ** P <0.01 and *** P <0.001. DPF, *Disporum cantoniense* petroleum ether fraction; ZVF, Z-VAD-FMK.

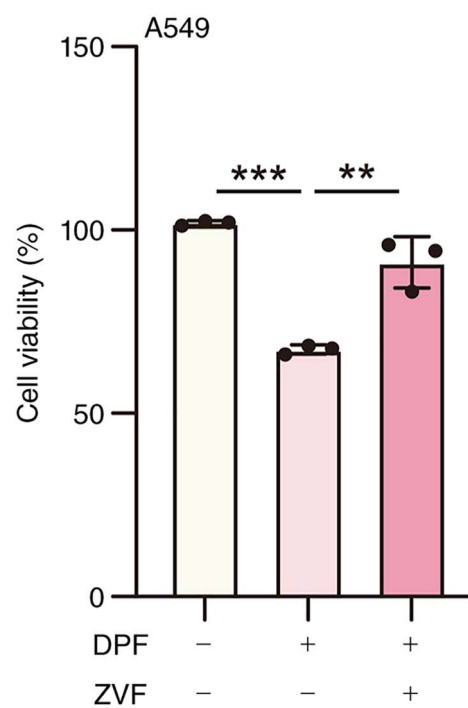


Figure S6. Western blotting validation of knockout efficiency in WT and Bax-Bak DKO MEF cells. (A) Western blot analysis of Bax protein levels in wild-type (WT) and Bax-Bak double-knockout (DKO) MEF cells. (B) Quantification of Bax/GAPDH ratios in WT and Bax-Bak DKO MEF cells. Statistical significance is denoted as *** $P < 0.001$. Data are presented as the mean $\pm$ SD of three independent experiments. MEF, mouse embryonic fibroblast; WT, wild-type; DKO, double knockout.

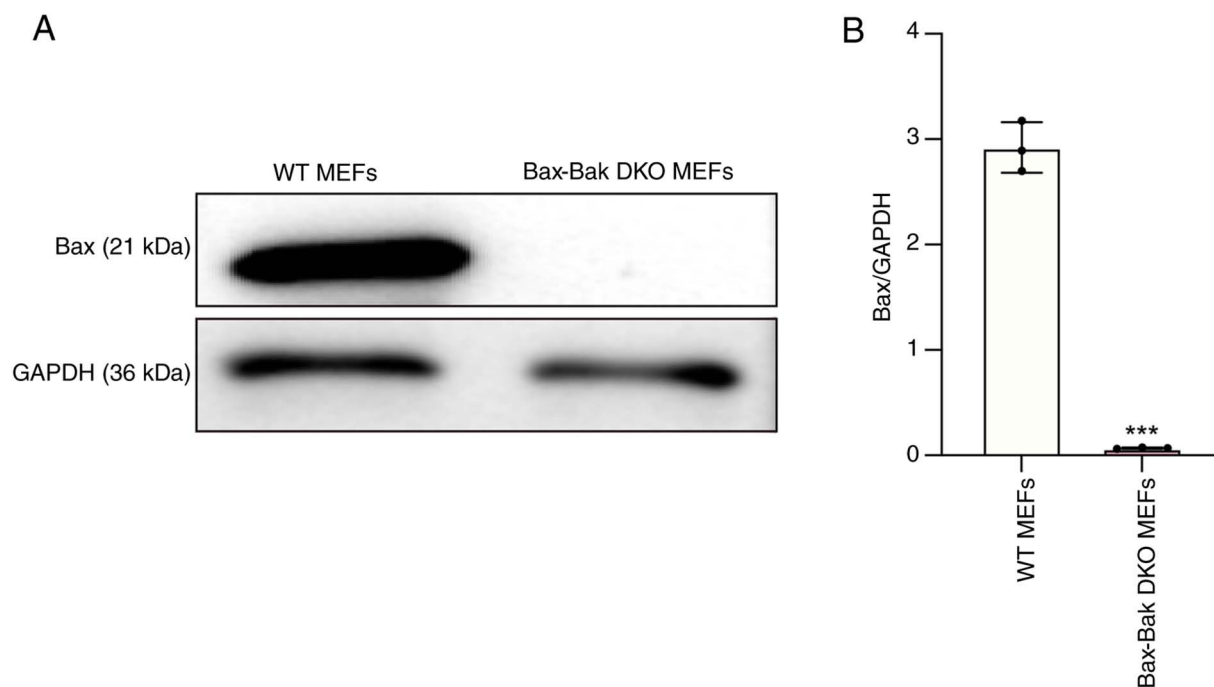


Figure S7. Cell viability of A549 cells treated with DPF in the presence or absence of CQ. Data are presented as the mean $\pm$ SD. Statistical significance is denoted as * P <0.05 and *** P <0.001. DPF, *Disporum cantoniense* petroleum ether fraction; CQ, chloroquine.

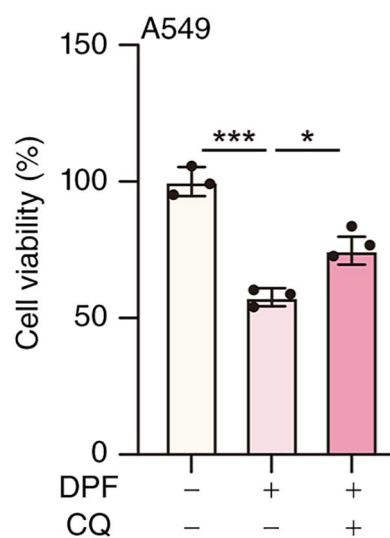


Figure S8. Western blotting validation of knockout efficiency in Atg7-knockout MEF cells. (A) Western blot analysis of Atg7 protein levels in MEF Atg7^{+/+} and MEF Atg7^{-/-} cells. (B) Quantification of Atg7/GAPDH ratios in MEF Atg7^{+/+} and MEF Atg7^{-/-} cells. Statistical significance is denoted as ***P<0.001. Data are presented as the mean $\pm$ SD of three independent experiments. MEF, mouse embryonic fibroblast.

