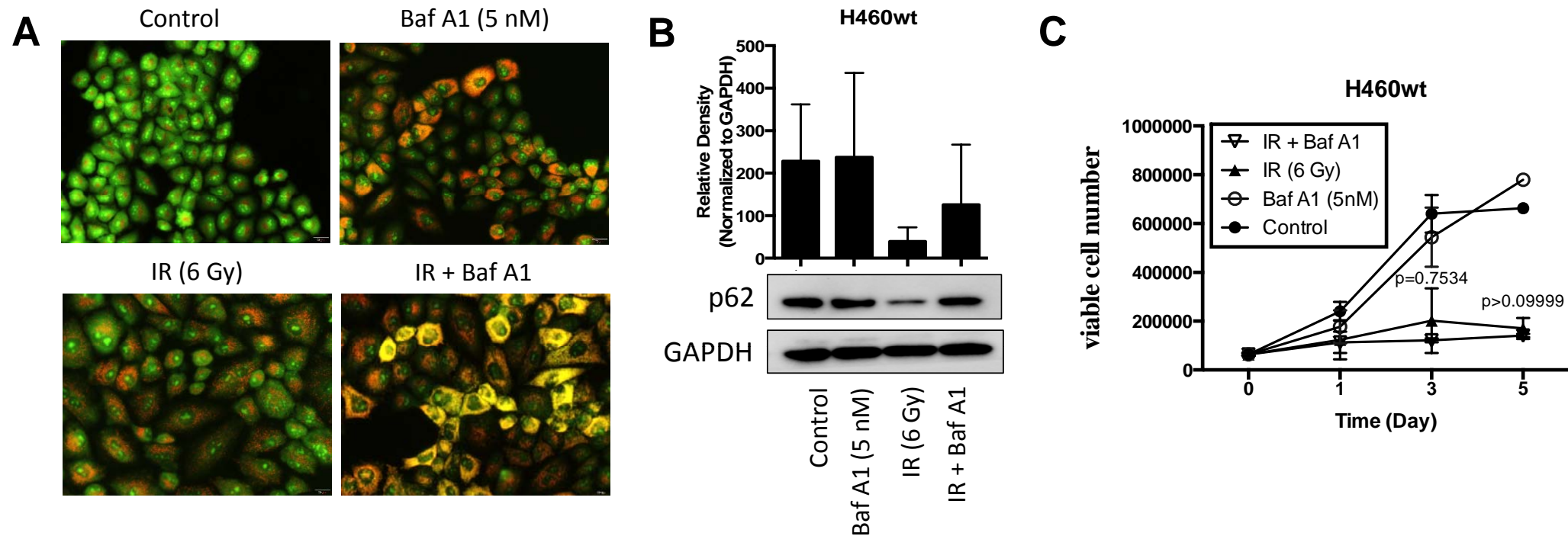
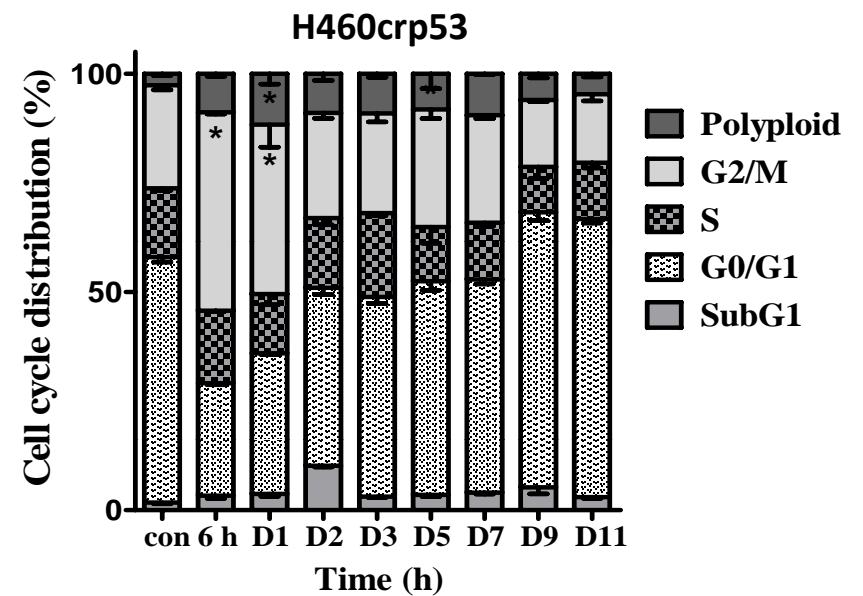
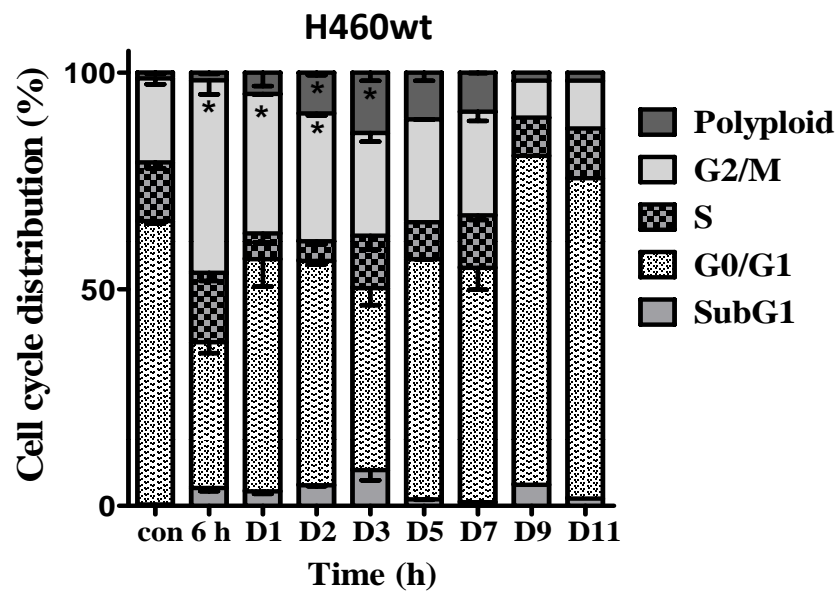


Supplemental Figure 1. Effect of autophagy inhibition on ROS generation in response to radiation in H460wt and H460crp53 cells. H460wt and H460crp53 cells were pre-treated with CQ (10 μ) or 3-MA (1mM) 3 h prior to 6 Gy radiation, and incubated for 72 h (3 days). ROS generation quantified based on DCFH-DA staining by flow cytometry. Results were from three independent experiments. *p < 0.05 and ****p < 0.0001, control cells versus cells treated with respective condition. ####p < 0.0001, radiated cells versus cells treated with both radiation and CQ. n.s., no significance..

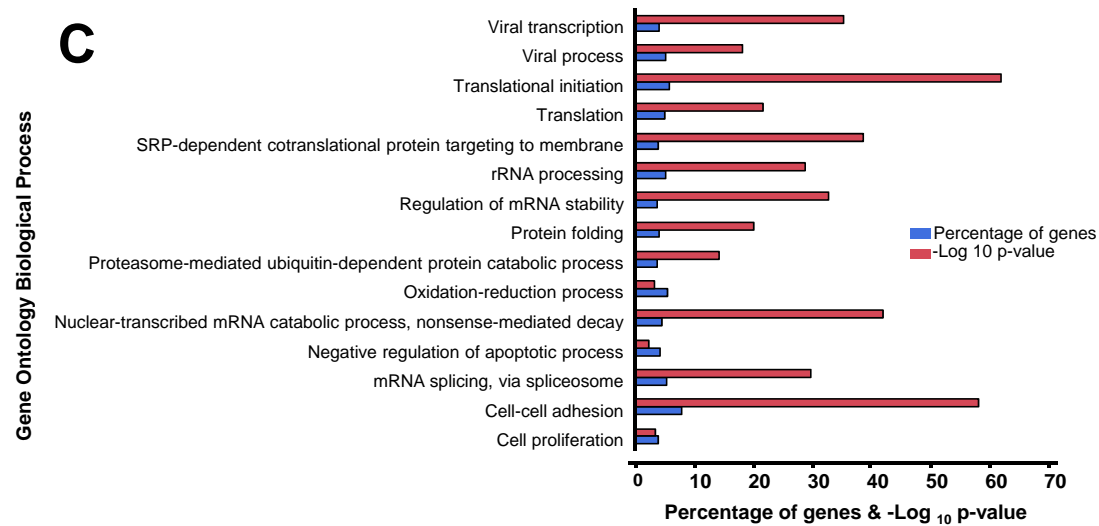
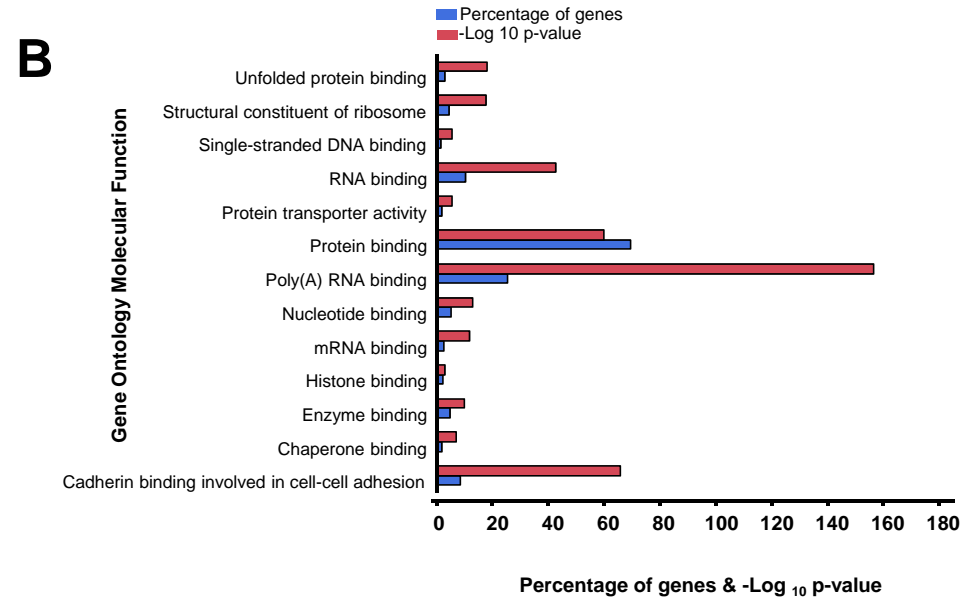
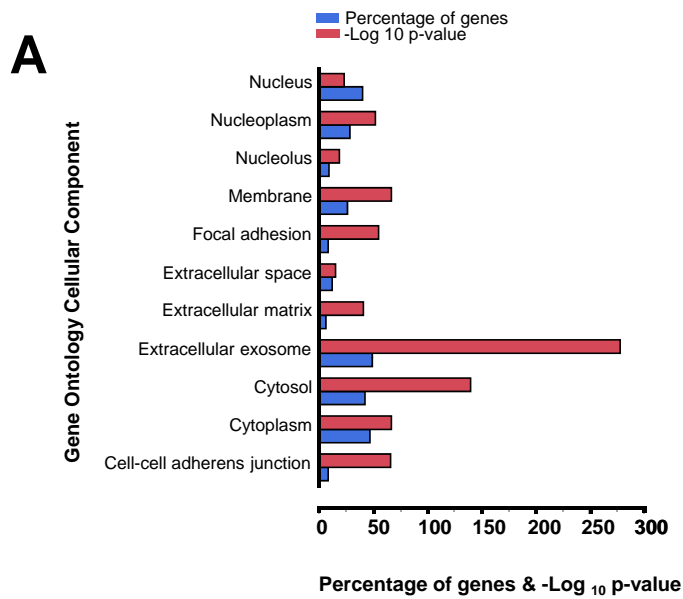


Supplemental Figure 2. Influence of Bafilomycin A1 (Baf A1) on radiation sensitivity in H460wt cells. A. Inhibition of autophagy by Baf A1.

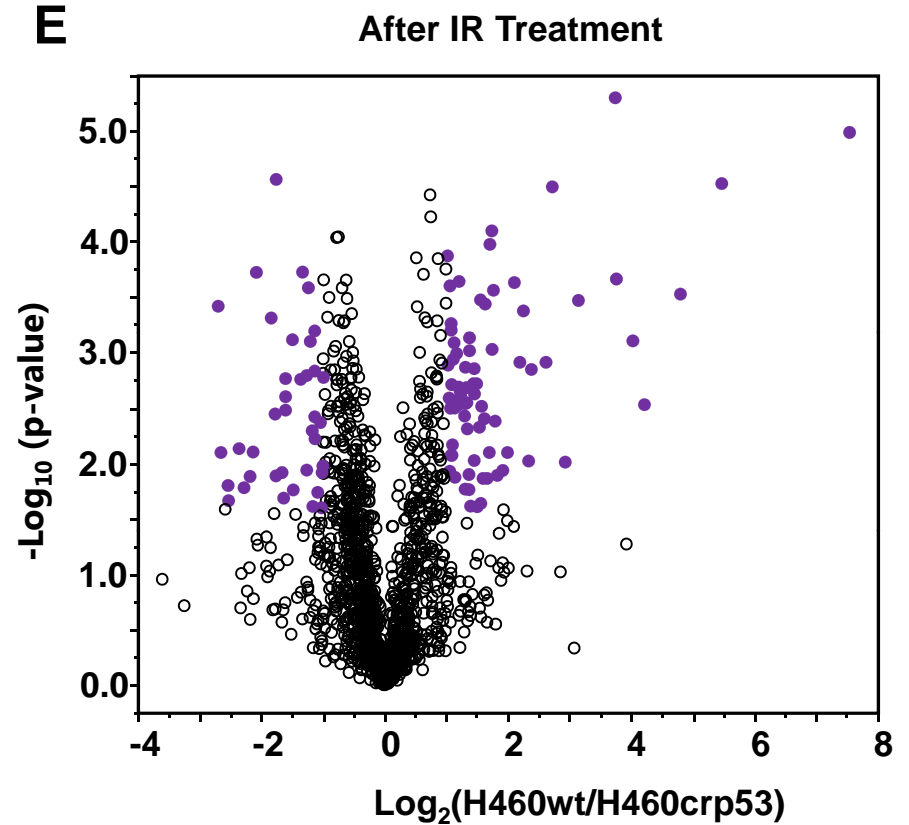
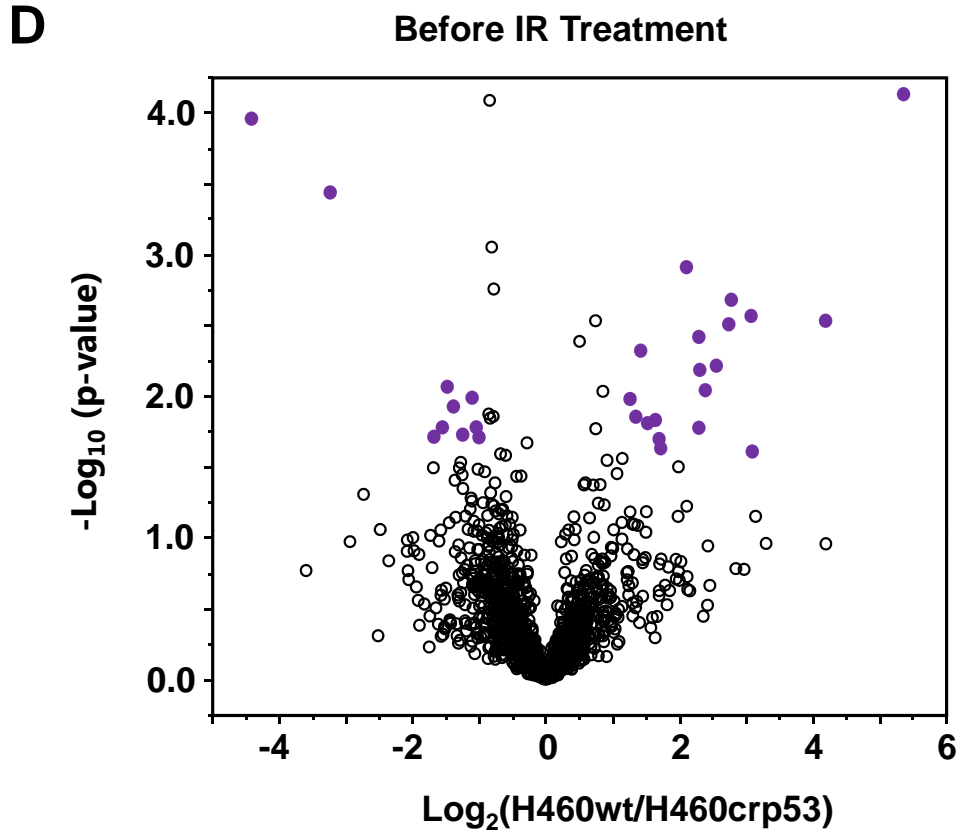
Fluorescence microscopy showing acridine orange stained vacuoles induced by 6 Gy radiation alone or with Baf A1 (5 nM) treatment (scale bar = 200 μ m). **B. Inhibition of autophagy by Baf A1.** Western blot showing autophagy blockade by Baf A1 (5 nM) based on levels of p62/SQSTM1. Cells were pretreated with Baf A1 for 3 h prior to irradiation and protein was isolated after 3 days. **C. Influence of autophagy inhibition on radiation sensitivity.** Cells were pretreated with Baf A1 for 3 h followed by radiation. Cell viability assay indicating that Baf A1 has no effect on radiosensitivity in H460wt cells.



Supplemental Figure 3. Radiation induces G2/M Phase arrest in H460wt and H460crp53 cells. Cells were exposed to 6 Gy of radiation, collected on the respective time points, and stained with propidium iodide. Fluorescence was quantified using flow cytometry and cell cycle analysis was performed. Results are from three independent experiments. * $p < 0.05$, control vs radiation treated group.



Suppl. Figure 4



Supplemental Figure 4. Functional and Statistical Analysis of H460 Cell Secretome. A) GO Cellular Components analysis of 1595 quantified proteins revealed the most significantly enriched cellular components as the extracellular exosomes. B) Protein and RNA binding constituted the most enriched molecular functions in the GO analysis. C) Among the GO Biological Processes most enriched in the dataset were cell-cell adhesion and translation initiation. D) Volcano plot showing differential secretion between H460wt cells and H460crp53 cells before ionizing radiation treatment. E) Volcano plot showing differential secretion between H460wt cells and H460crp53 cells after ionizing radiation treatment. Significance threshold: $p < 0.025$, 2-fold change