The Effect of Glutathione Peroxidase-1knockout on Anticancer Drug Sensitivities and the Accumulation of Reactive Oxygen Species in Hap-1 Human Cancer Cells

Supporting information

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List of Figures:

Guide RNA sequence: TAAGTAGTACCTTGCCCCGC Clone: 3261-10
Mutation: 38bp deletion in exon 1, causing frameshift

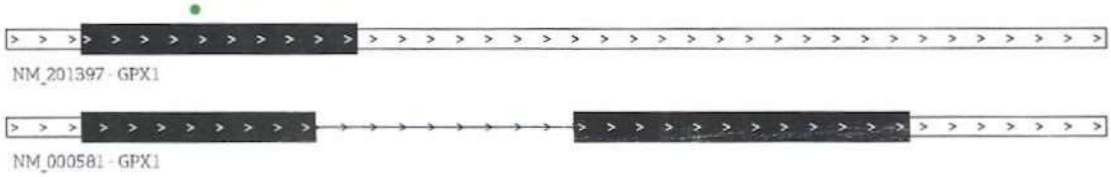

Figure S1. Position of the frameshift mutation within the GPx1 gene.

Figure s2. Sequencing result of clone, mapped on NM_000581.

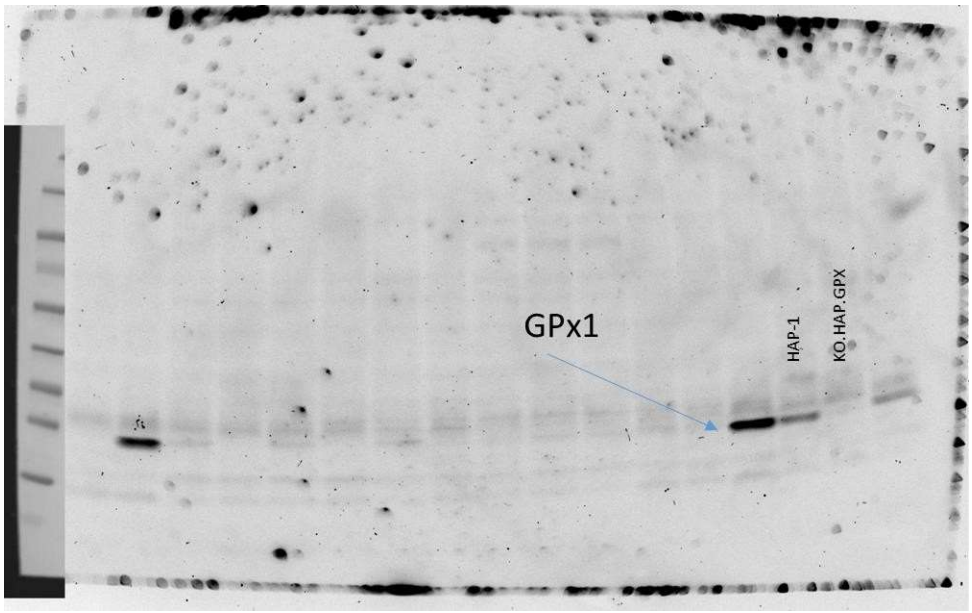

Figure S3. Representative western blot of GPx1 in various cancer cell lines. The corresponding lanes for HAP-1 and KO.HAP-1.GPx1 cells are tagged. Positive control was run with purified bovine GPx1.

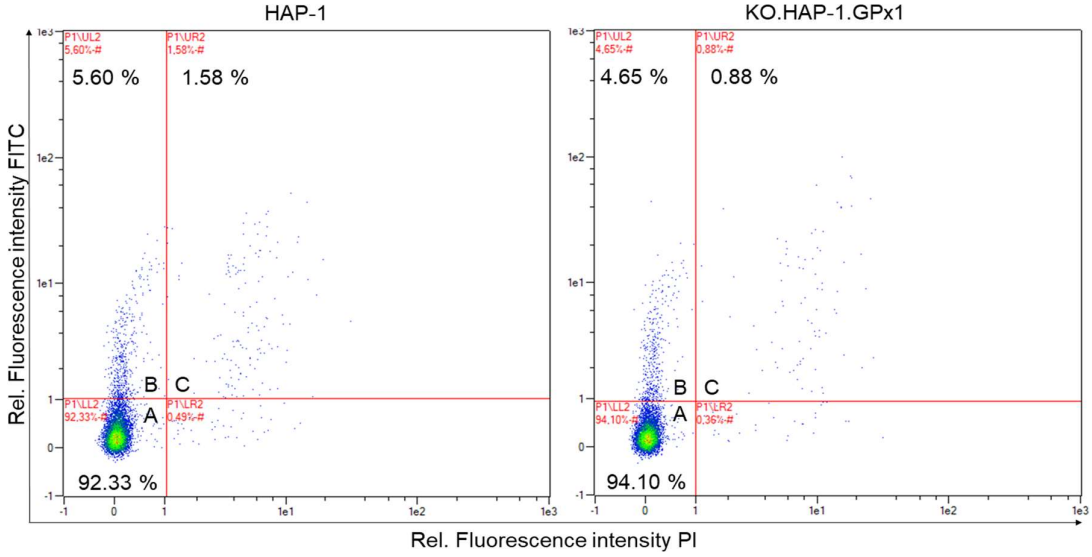

Figure S4. Representative dot plots from flow cytometric analysis of the Annexin V-FITC/PI Assay in untreated HAP-1 and KO.HAP-1.GPx1 cells determining background apoptosis. Displayed on x-axis: relative fluorescence intensity of propidium iodide (PI). Displayed on y-axis: relative fluorescence intensity of fluorescein isothiocyanate (FITC). Analysis quadrants: **A**) viable cells (FITC/PI negative) **B**) early apoptotic cells (FITC positive/PI negative) **C**) late apoptotic cells (FITC/PI positive).

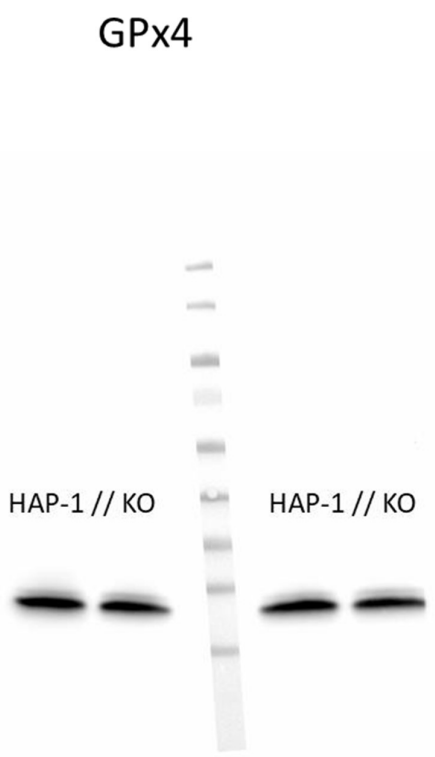

Figure S5. Representative western blot of GPx4 in HAP-1 and KO.HAP-1.GPx1 cells.

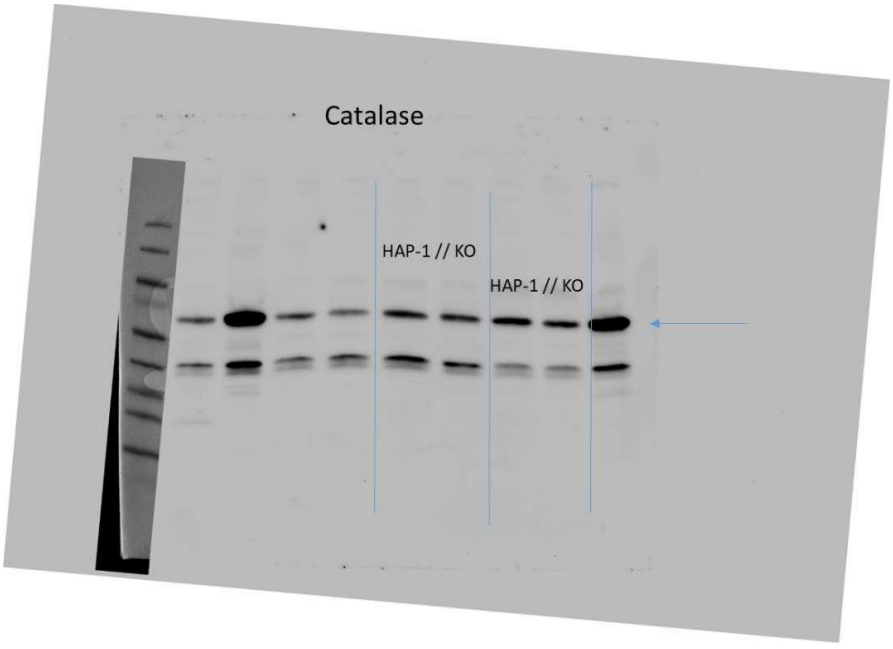

Figure S6. Representative western blot of catalase in various cell lines; corresponding signals in HAP- 1 and KO.HAP-1.GPx1 are tagged.

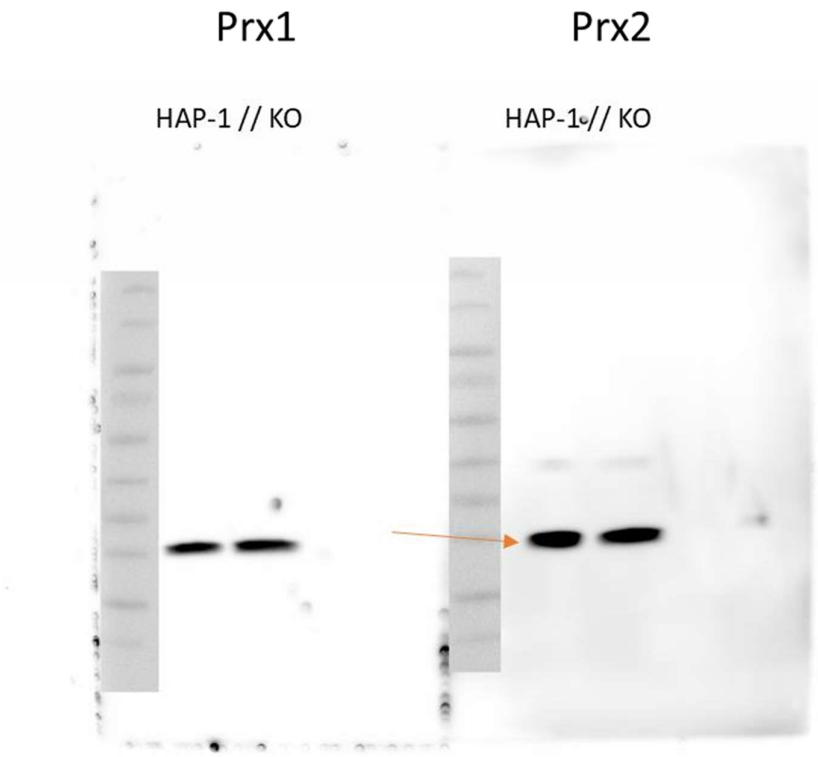

Figure S7. Representative western blot of Prx1 and Prx2 in HAP-1 and KO.HAP-1.GPx1 cells.

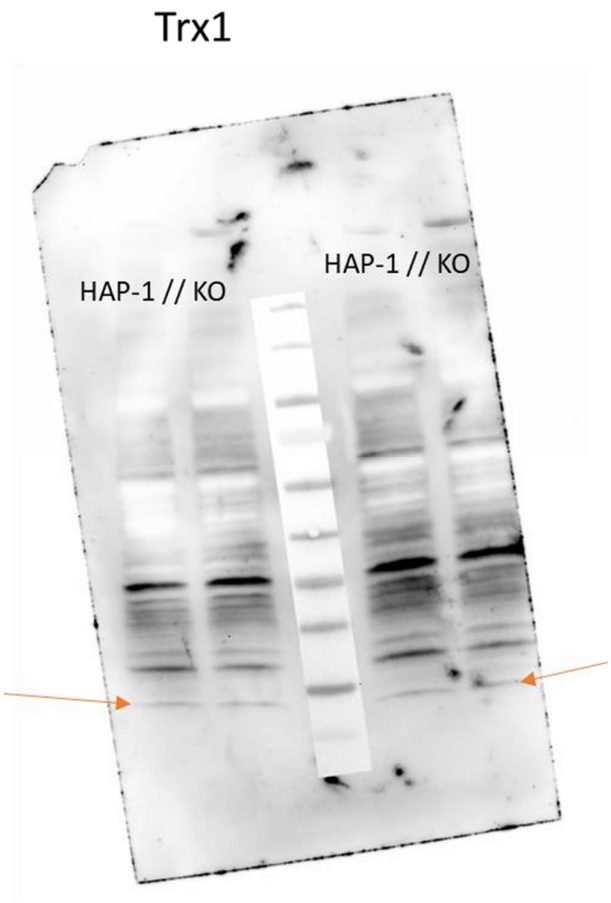

Figure S8. Representative western blot of Trx1 in HAP-1 and KO.HAP-1.GPx1 cells.

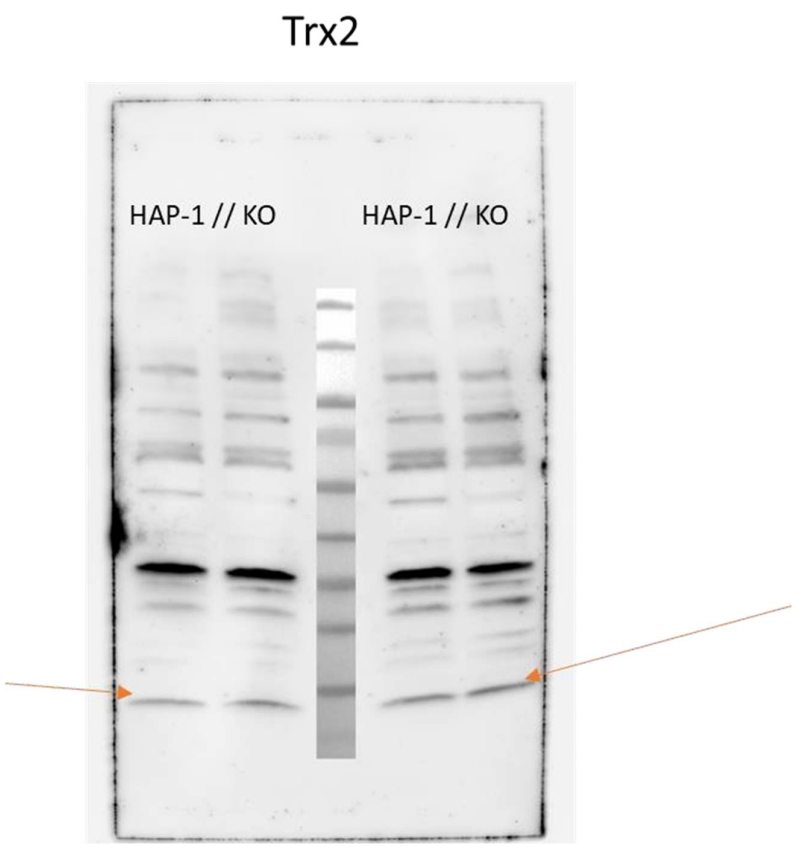

Figure S9. Representative western blot of Trx2 in HAP-1 and KO.HAP-1.GPx1 cells.