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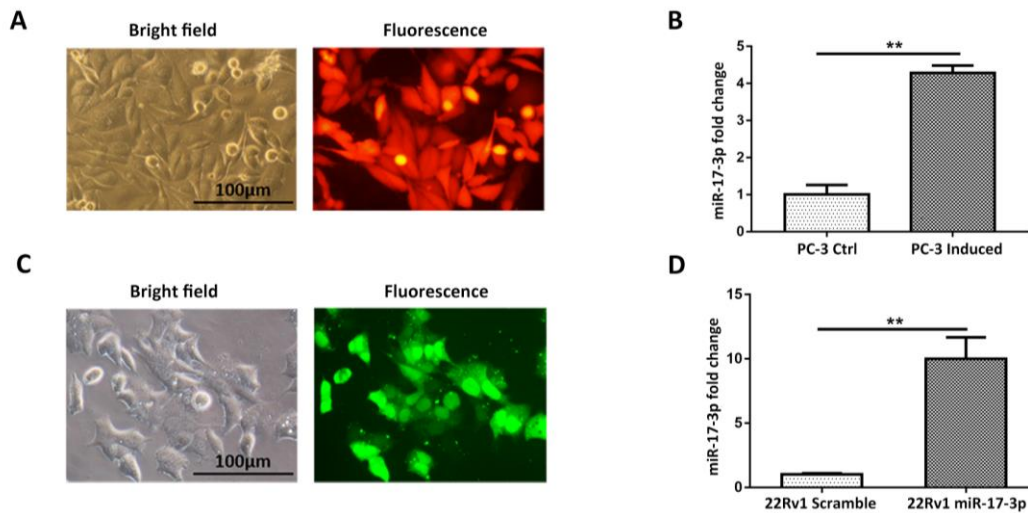
## **Supplemental Information**

### **miR-17-3p Downregulates Mitochondrial Antioxidant Enzymes and Enhances the Radiosensitivity of Prostate Cancer Cells**

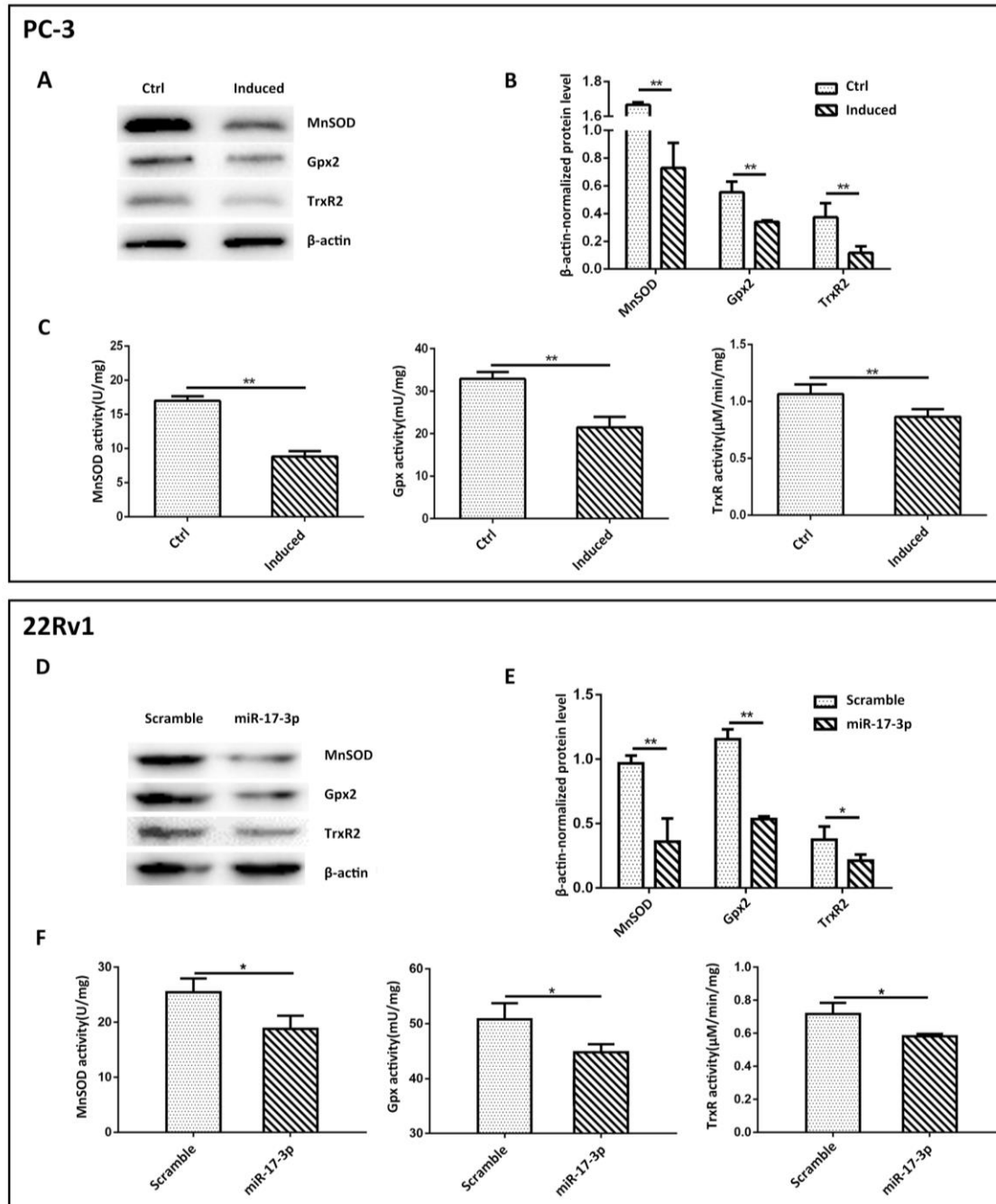
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Xu**



**Figure S1. The putative binding sites of miR-17-3p located in the 3'-UTR of the three antioxidant genes.** The *SOD2* gene encodes manganese superoxide dismutase (MnSOD), a primary antioxidant enzyme in mitochondria; the *GPX2* gene encodes glutathione peroxidase 2 (Gpx2) in mitochondria; the *TXNRD2* gene encodes thioredoxin reductase 2 (TrxR2) in mitochondria.

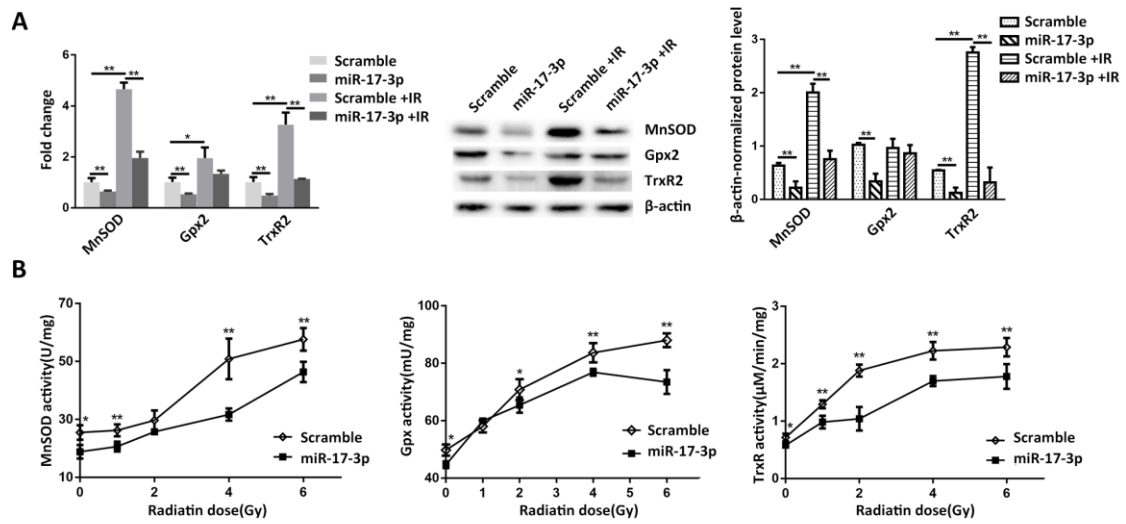


**Figure S2. Ectopically expressed miR-17-3p in PCa cells.** (A) A Tet-on regulated lentiviral expressing miR-17-3p was stably transduced into PC-3 cells and validated by Dox inducer. The expression of RFP-tag was determined. (B) The levels of miR-17-3p in Dox-induced cells were quantified by qRT-PCR. (C) miR-17-3p was transfected into 22Rv1 cells and screened by green fluorescence. (D) The levels of miR-17-3p in 22Rv1 cells were quantified by qRT-PCR. **\*\***( $P < 0.01$ ) present the significances between two groups.



**Figure S3. Quantification of MnSOD, Gpx and TrxR in the miR-17-3p expressed cells.**

(A and B) After Dox treatment, the PC-3 cell extracts were used to quantify the three antioxidant enzymes by western blots. (C) The relating enzymatic activities of the three antioxidant enzymes were measured accordingly. (D-F) After transfecting miR-17-3p into 22Rv1 cells, the protein levels of the three antioxidant enzymes and their activities were quantified corresponding to A-C. NS, not significant, \*( $P < 0.05$ ) and \*\*( $P < 0.01$ ) present the significances between two groups.



**Figure S4. miR-17-3p-mediated suppression of IR-induced three mitochondrial antioxidants in 22Rv1 cells.** (A) The miR-17-3p transfected cells were treated with IR and the expression levels of the three antioxidant enzymes were determined by qRT-PCR and western blots with  $\beta$ -actin normalization. (B) After miR-17-3p transfection, the cells were treated with different doses of IR as indicated. The enzymatic activities of the three antioxidant enzymes were measured. \*( $P < 0.05$ ) and \*\*( $P < 0.01$ ) present the significances between two groups.

**Table S1**

The sequences of quantitative PCR primers	
<i>miR-17-3p</i>	Forward: CCTCAATTGATTCACCCACC
	Reverse: GCTGCTCTCCCAAGGAT
<i>SOD2</i>	Forward: AGCATGTTGAGCCGGGAGT
	Reverse: AGGTTGTTACGTTAGCCGC
<i>GPX2</i>	Forward: TGGTGCCTGTGTCTGTAGT
	Reverse: TCAGGATCTCCTATTCTGACA
<i>TXNRD2</i>	Forward: CAGCGGGACTATGATCTCCT
	Reverse: AGGTTCCACGTTAGTCCACCA
$\beta$ -actin	Forward: CCTCAATTGATTCACCCACC
	Reverse: GCTGCTCTCCCAAGGAT