

# Supplementary Materials for

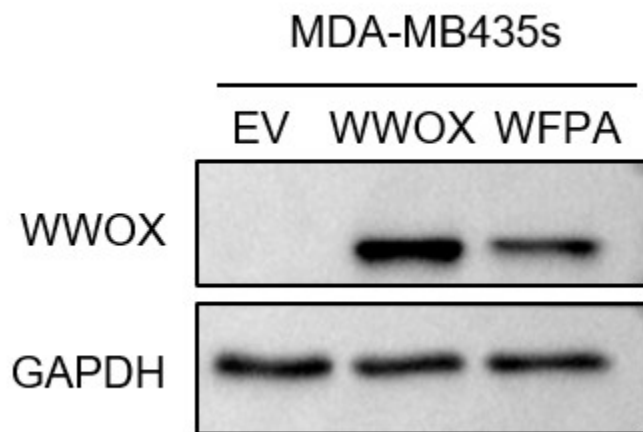
## **Pleiotropic tumor suppressor functions of WWOX in antagonizing metastasis**

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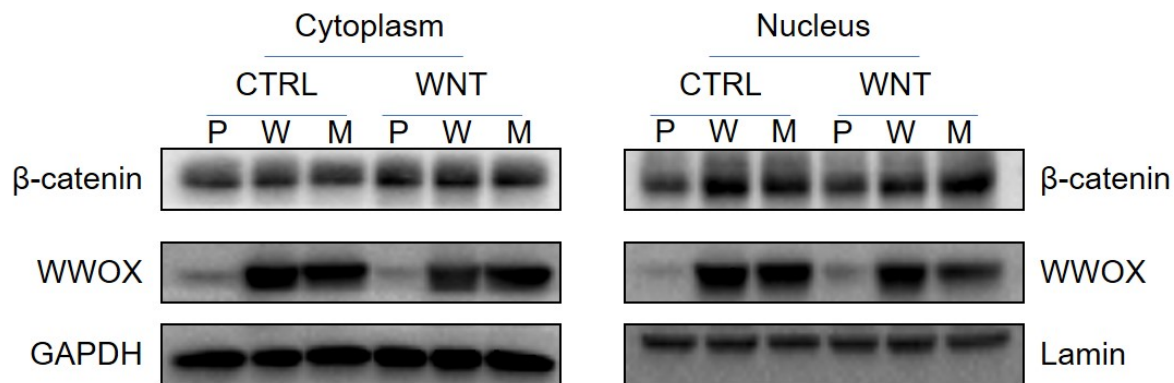
### **This PDF file includes:**

Figures. S1 to S2  
Captions for Tables S1 to S7

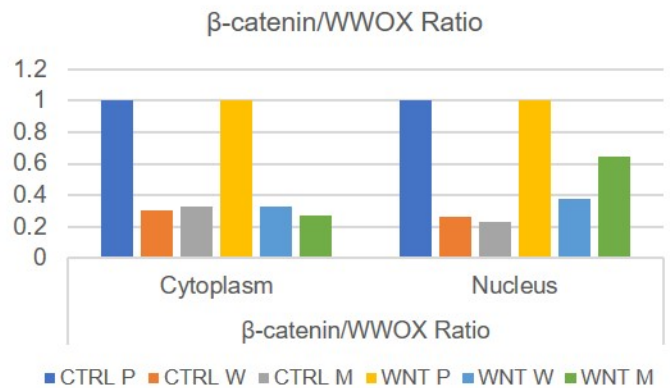


**Figure. S1.**

WWOX levels in manipulated MDA-MB435s cells.



| <b>β-catenin/WWOX Ratio</b> |   |           |             |
|-----------------------------|---|-----------|-------------|
|                             |   | Cytoplasm | Nucleus     |
| CTRL                        | P | 1         | 1           |
|                             | W | 0.3       | 0.26        |
|                             | M | 0.33      | 0.23        |
| WNT                         | P | 1         | <b>1</b>    |
|                             | W | 0.33      | <b>0.38</b> |
|                             | M | 0.27      | <b>0.64</b> |



**Figure. S2.**

WWOX manipulation modulates nuclear  $\beta$ -catenin levels. This blot shows the levels of  $\beta$ -catenin in the cytoplasm and nucleus of MDA-MB-231 cells with or without WNT3A activation. Shown are the levels of  $\beta$ -catenin relative to the WWOX expression levels. Levels were normalized relative to unmanipulated parental cells. Higher levels of WT WWOX in the overexpressed cells result in lower levels of  $\beta$ -catenin in the nucleus, demonstrating a negative correlation between the two, and strengthening what is previously known about the relationship between WWOX and DVL2. Overexpression of mutant WWOX (WFOA) instead of WT shows a partial rescue of this.

**Table S1.**

mRNA expression profiling in empty-vector (EV), WWOX and WWOX-WFPA mutant – expressing in MDA-MB435s cells.

**Table S2.**

Enriched pathways from downregulated genes

**Table S3.**

Enriched pathways from upregulated genes

**Table S4.**

Predicted targets of miRNAs genechip experiments

**Table S5.**

mRNA expression of the predicted targets of the downregulated miRNAs

**Table S6.**

Pathway enrichment analysis for the “strong predicted” targets of the miRNAs

**Table S7.**

List of proteins that bind either WT WWOX, Mutant WFPA-WWOX or both in MDA-MB435s cells, obtained via Mass-spectrometry