

iScience, Volume 25

## **Supplemental information**

### **Iloprost requires the Frizzled-9 receptor to prevent lung cancer**

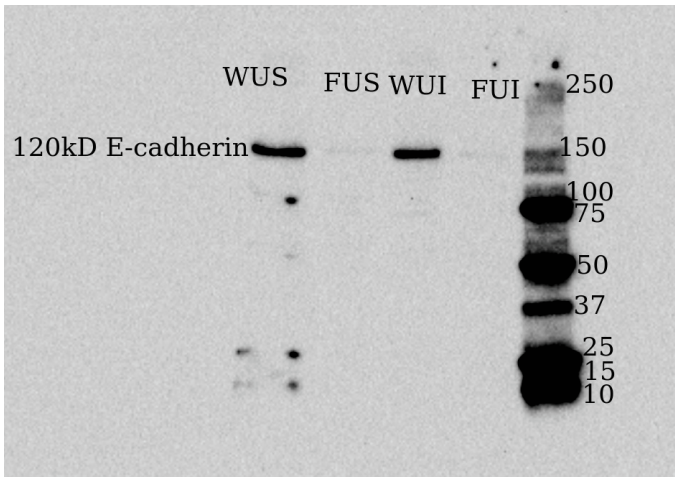
**Kayla Sompel, Lori D. Dwyer-Nield, Alex J. Smith, Alamelu Elango, Don S. Backos, Bicheng Zhang, James Gross, Kristina Ternyak, Jennifer L. Matsuda, Katrina Kopf, Robert L. Keith, and Meredith A. Tennis**

## Supplemental Table and Figures

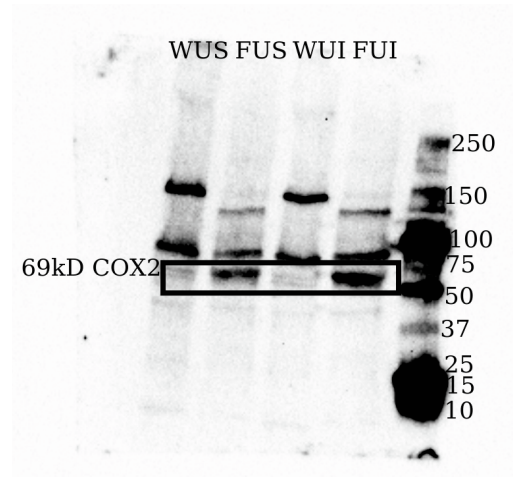
Supplemental Table S1. **Ki67 analysis in mouse lung tissue, related to Figure 1.**

<b>Group</b>	<b>Tumor Area (mm<sup>2</sup>)</b>	<b>Ki67+ Cells</b>	<b>Ratio (Ki67+/mm<sup>2</sup>)</b>
<b>WUS</b>	0.24	2	8.33
	0.18	2	11.1
	0.39	1	2.56
	0.275	5	18.18
<b>WUI</b>	0.85	3	3.52
	No Tumor	0	0
	No tumor	0	0
<b>FUS</b>	0.455	7	15.38
	0.96	4	4.17
	0.32	0	0
<b>FUI</b>	0.88	8	9.09
	0.695	4	5.75
	0.61	3	4.92
	0.75	3	4.00

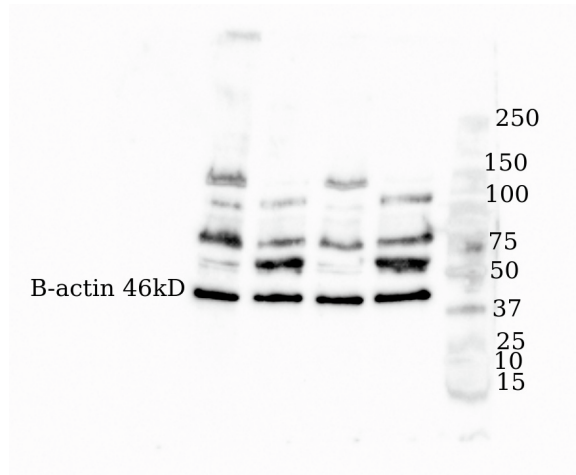
A



B

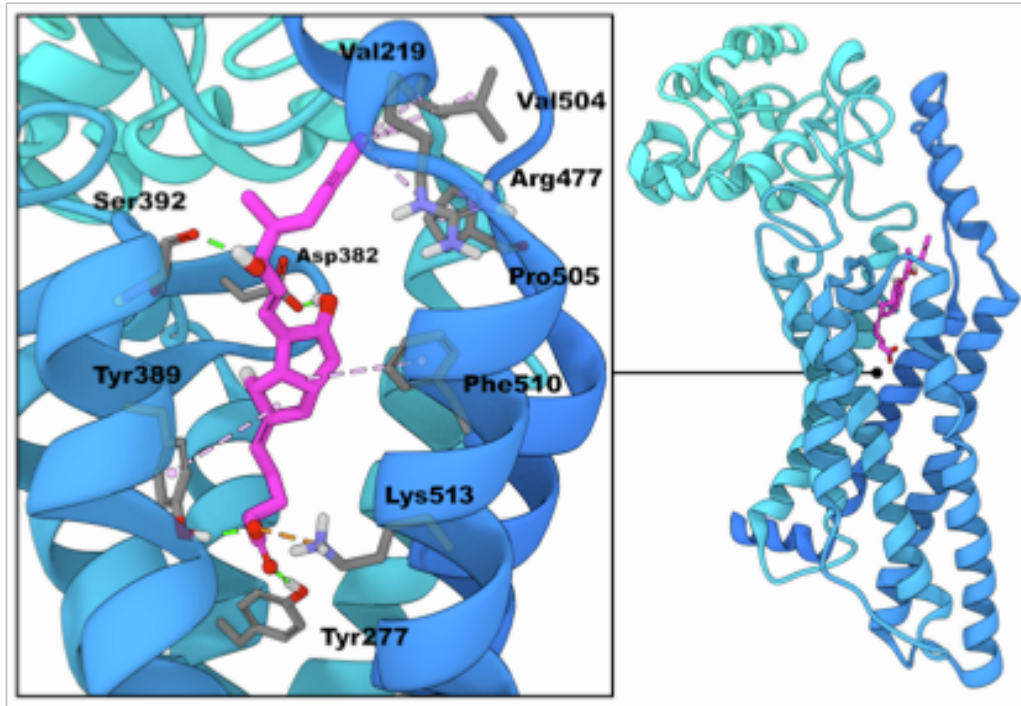


C



Supplemental Figure S1. **Full western blot images, related to Figure 3.** Western blots with molecular marker for (A) Ecadherin, (B) COX2, and (C)  $\beta$ -actin. WUS, wild type urethane saline; FUS, *Fzd9*<sup>-/-</sup> urethane saline; WUI, wild type urethane iloprost; FUI, *Fzd9*<sup>-/-</sup> urethane iloprost. Molecular marker is Protein Plus Precision Kaleidoscope (BioRad).

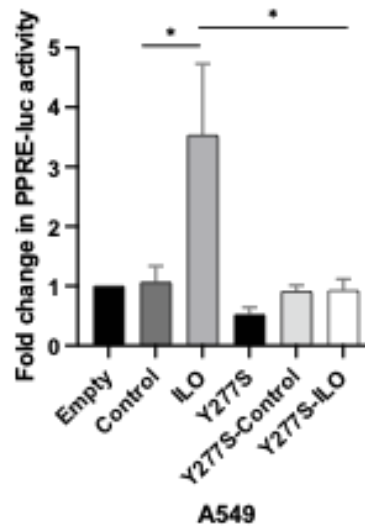
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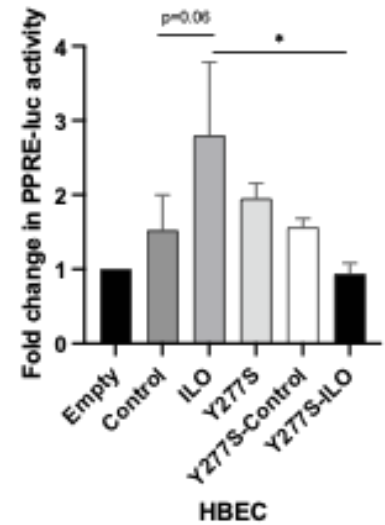
B



C



D



Supplemental Figure S2. **Iloprost is predicted to bind FZD<sub>9</sub>, related to STAR Methods.** A) The predicted binding orientation of iloprost (magenta sticks) in the ligand binding site of human FZD<sub>9</sub> (ribbons colored from the N-terminus (Cyan) to the C-terminus (Blue)) with interacting residues shown as gray sticks. Non-bond interactions are shown as dashed lines: hydrogen bonds (green), electrostatic/salt-bridge (orange), and hydrophobic (pink). B) Sequence of FZD<sub>9</sub> site directed mutation. C-D) Fold change in PPRE-luciferase activity after transfection with a mutant FZD<sub>9</sub> plasmid and treatment with 10uM iloprost in (C) A549 or (D) HBEC cell lines (N=3). Transfections were conducted in triplicate with vehicle (Control) and empty plasmid (Empty) controls. ILO, iloprost; Y277S, mutant FZD<sub>9</sub> plasmid. Data are represented as mean ± SEM. Student's t-test was used to measure significance. \*p<0.05