

Supplementary Figure 1. Frizzled receptor expression does not correlate to that of Wnt5A. *FZD2* and *FZD5* expression in melanoma cell lines (A) does not correlate to *WNT5A* expression (B).

Supplementary Figure 2. ROR2 is internalized into endosomes via clathrin, and not caveolin. ROR2 (green) does not co-localize with caveolin (red) in melanoma cell lines (A). ROR2 (green) does, however, co-localize with EEA1 (red), a marker of the early endosome (B), but only in the Wnt5A high lines (UACC903, M93-047).

Supplementary Figure 3. ROR2 siRNA inhibits the motility of melanoma cells. G361 cells are much less invasive (in a matrigel migration assay) than either UACC903 or M93-047 cells (A). UACC903 cells and M93-047 cells (B) are highly invasive melanoma cell lines and can close a scratch wound in 12-24 hours. *ROR2* knockdown significantly inhibits the motility of these cells (C). Low-Wnt5A, low- metastatic G361 cells cannot close a scratch wound in under 96 hours, but when treated with rWnt5A, these cells are able to close a scratch wound in 48 hours (D). However, rWnt5A cannot increase the rate of closure in the presence of *ROR2* siRNA. A second siRNA sequence was used to

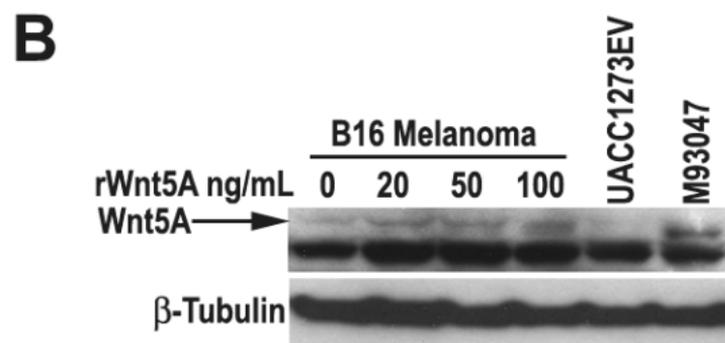
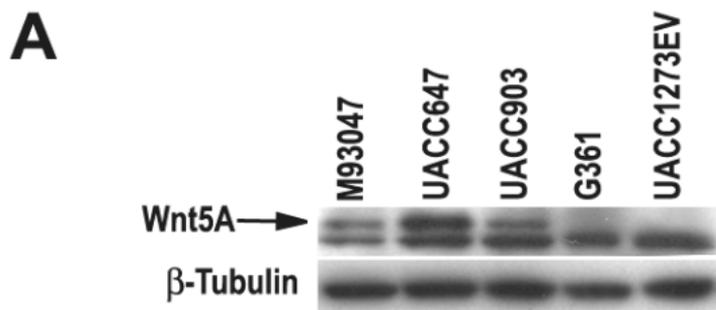
confirm specificity of knockdown, and ROR2 and phospho-PKC expression (E) and invasion (F) were decreased in the presence of the second siRNA in M93-047 cells.

Supplementary Figure 4. Wnt5A Expression Across Cell Lines. Wnt5A (upper band) is expressed abundantly in the highly metastatic M93047, UACC647 and UACC903 cell lines, but not in G361 or UACC1273EV cell lines (A). In B16 cells, there is more Wnt5A expression (upper band) than in UACC1273EV cell lines, but not as much as in M93-047 lines (B). Treatment of B16 cells with rWnt5A increases Wnt5A expression, and we have shown that this correlates to increased metastasis of these cells (Dissanayake et al., 2008).

Type of file: figure

Label: 10

Filename: figure_10.tif

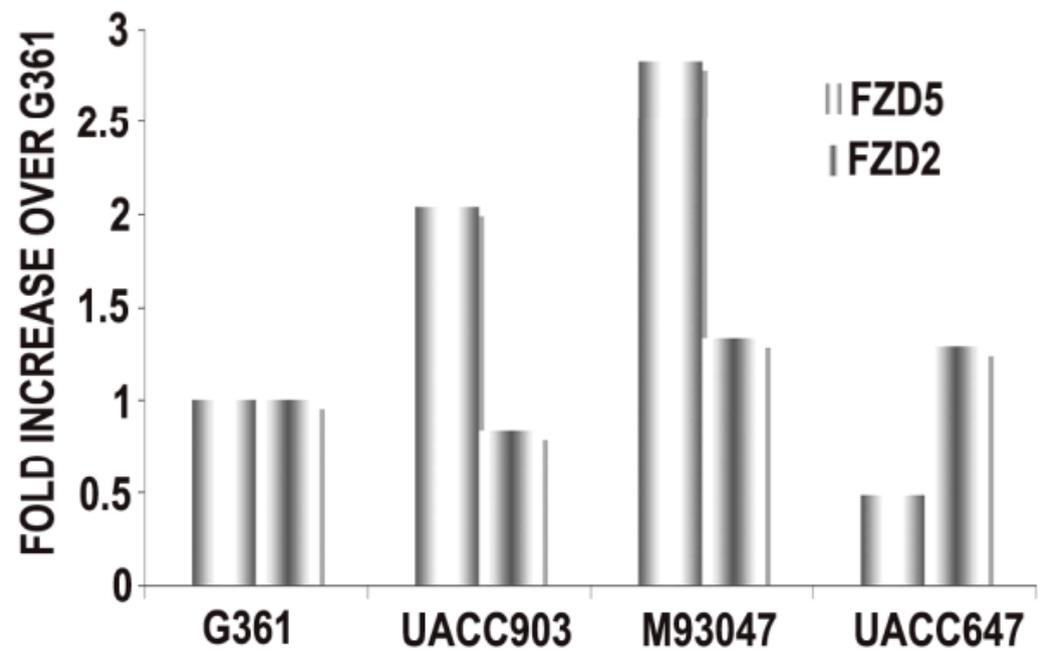
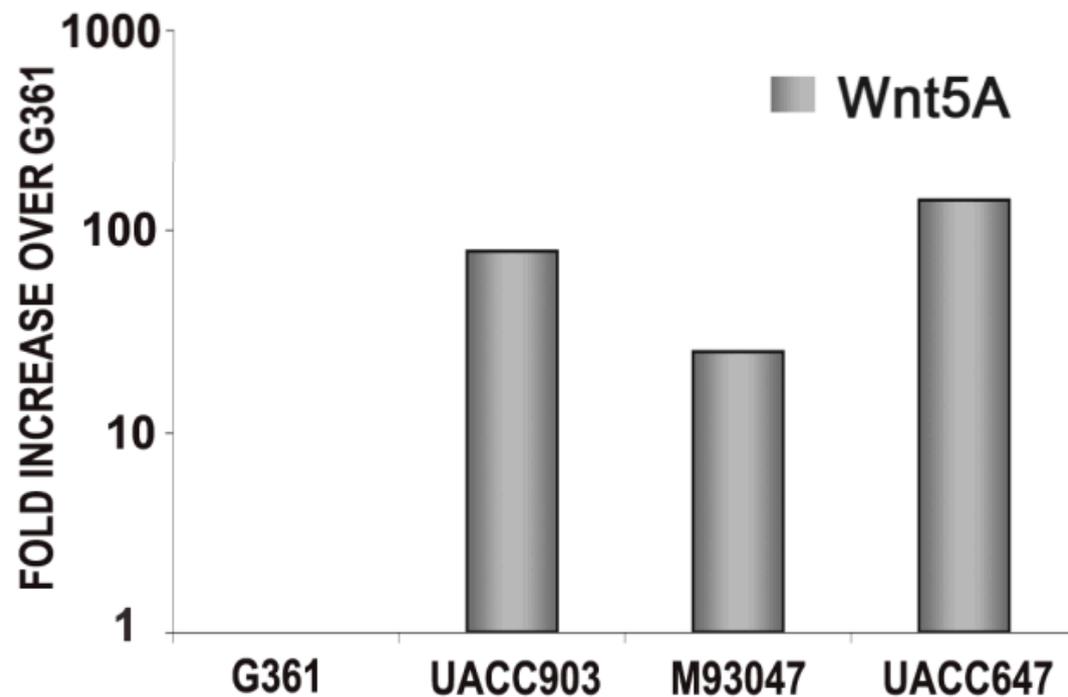


Supplementary Figure 4

Type of file: figure

Label: 7

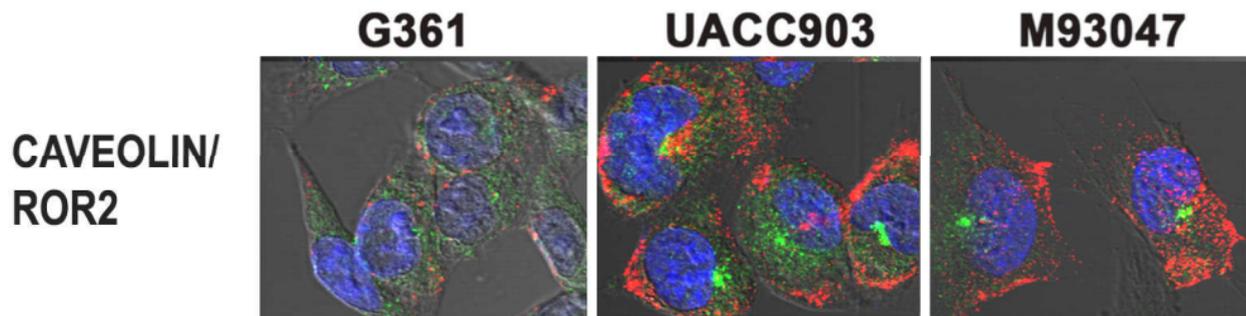
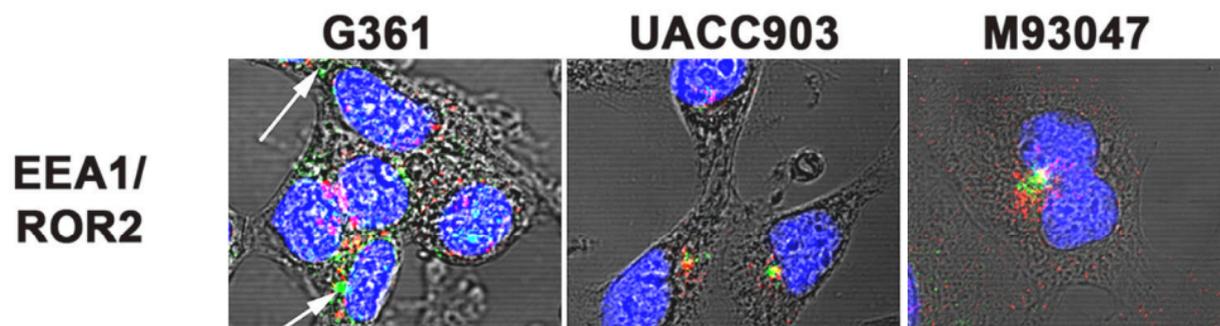
Filename: figure_7.tif

A**B****Supplementary Figure 1**

Type of file: figure

Label: 8

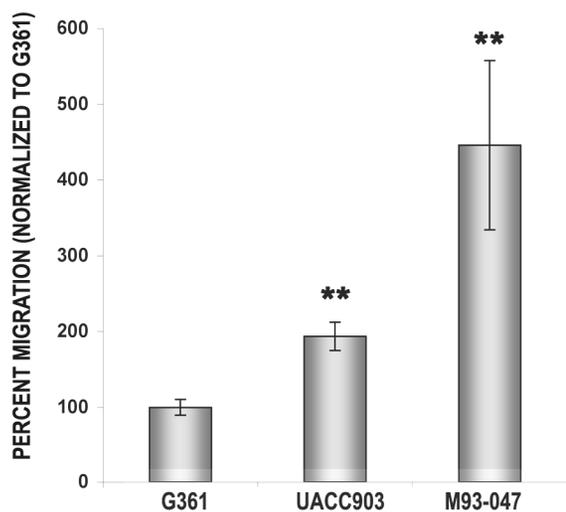
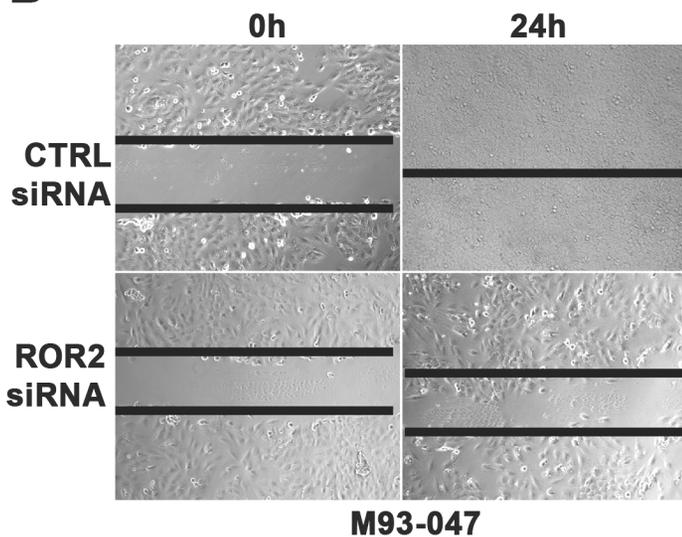
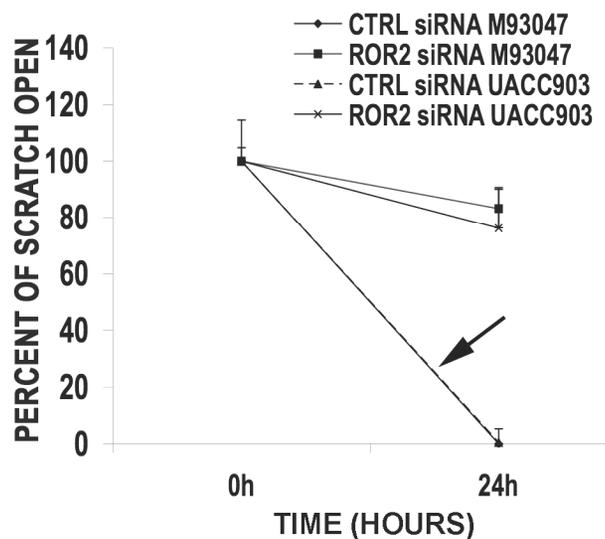
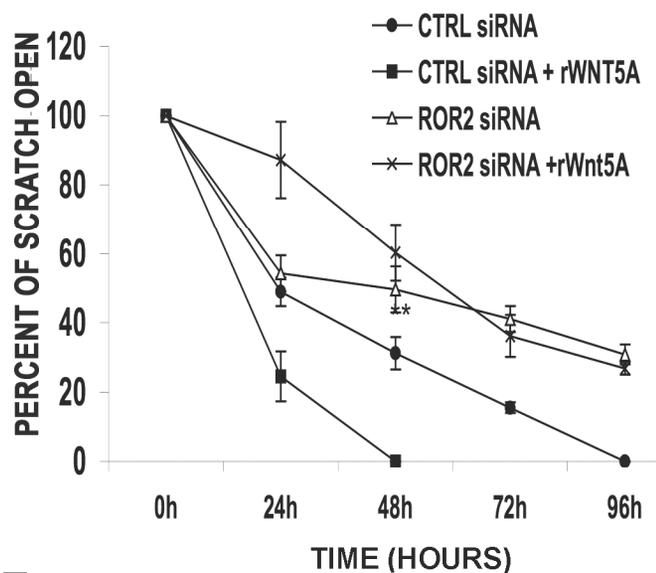
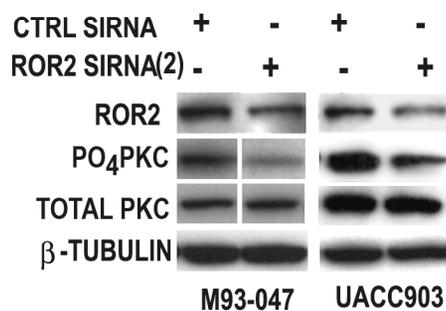
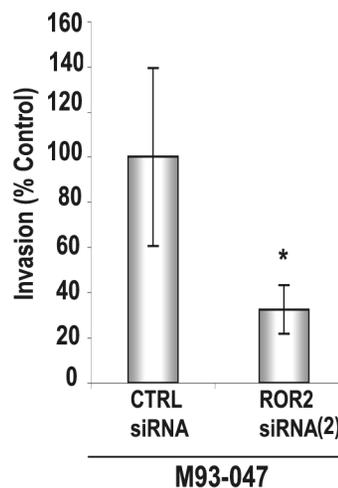
Filename: figure_8.tif

A**B****Supplementary Figure 2**

Type of file: figure

Label: 9

Filename: figure_9.tif

A**B****C****D****E****F**

Supplementary Figure 3