

## Supplemental Figure Legends

**Supplemental Figure S1.** Expression of adherens junction proteins. Cell lysates from vector control and MCF-10A/Gab2 cells were Western blotted as indicated.

**Supplemental Figure S2.** Activation of Erk in control and Gab2-overexpressing cells. Cells were plated on collagen IV for the indicated times. Cell lysates were prepared and Western blotted for activated and total Erk. Following densitometry, activated Erk levels were normalized for total Erk protein and expressed relative to the value for control cells, which was arbitrarily set at 1.0.

**Supplemental Figure S3.** Effect of Shp2 knockdown on cell spreading. Top panel: Western blotting of lysates derived from mock-transfected cells (A), or cells transfected with non-targetting (B) or two independent Shp2-selective siRNAs (C and D). The bottom photomicrographs indicate the morphology of vector and MCF-10A/Gab2 cells subjected to these treatments and then plated for 18 h on collagen IV. Scale bar 50 $\mu$ m.

## Video descriptions

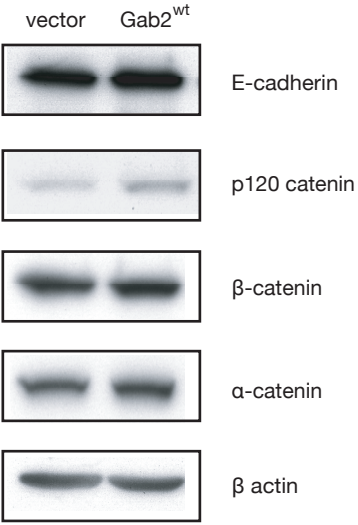
Videos 1 and 2: MCF-10A/Gab2 cells exhibit a lack of persistent directionality (video 1 for control, video 2 for MCF-10A/Gab2).

Videos 3 and 4: MCF-10A/Gab2 cells exhibit reduced stability of cell colonies (video 3 for control, video 4 for MCF-10A/Gab2).

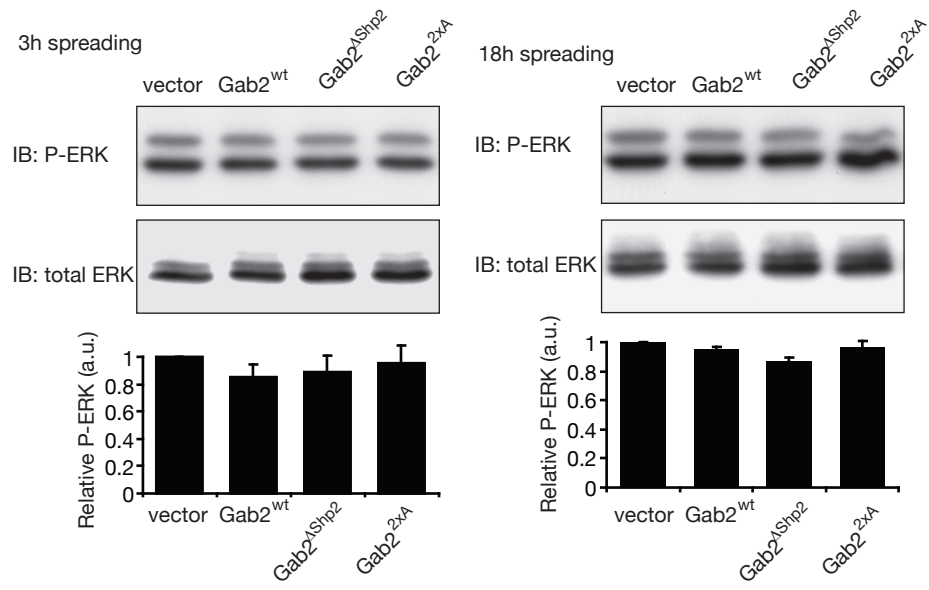
Videos 5 and 6: MCF-10A/Gab2 cells tend to disperse following cell division, rather than associating to form epithelial colonies (video 5 for control, video 6 for MCF-10A/Gab2).

Video 7: MCF-10A/Gab2 cells have a reduced tendency to join pre-existing colonies (video 7 for MCF-10A/Gab2, compare to video 3 for control).

**Supplemental Figure S1**



**Supplemental Figure S2**



Supplemental Figure S3

