

## **SUPPLEMENT FIGURE LEGENDS**

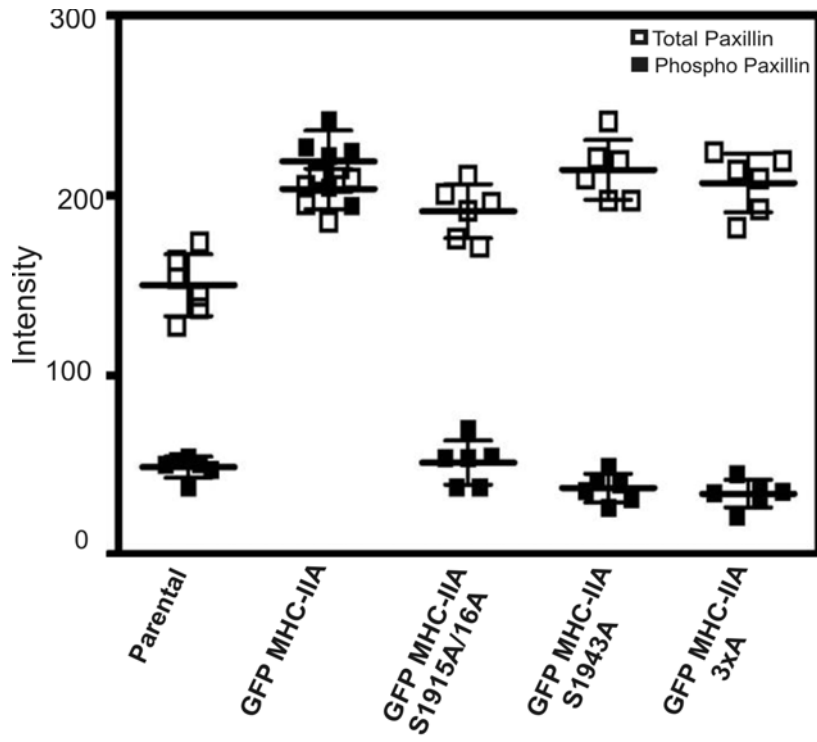
**Supplement Figure 1:** Scattered plot corresponding to figure 1D showing quantitation of paxillin versus phospho-Y118 paxillin staining in actively spreading parental COS-7 cells and COS-7 cells expressing the indicated GFP MHC-IIA construct. Data plotted as mean +/- SD.

**Supplement Figure 2:** Scattered plot corresponding to figure 3C showing quantitation of total paxillin versus phospho-Y118 paxillin staining in parental COS-7 cells and COS-7 cells expressing the indicated GFP MHC-IIA construct growing on culture plate for 24 hours. Data plotted as mean +/- SD.

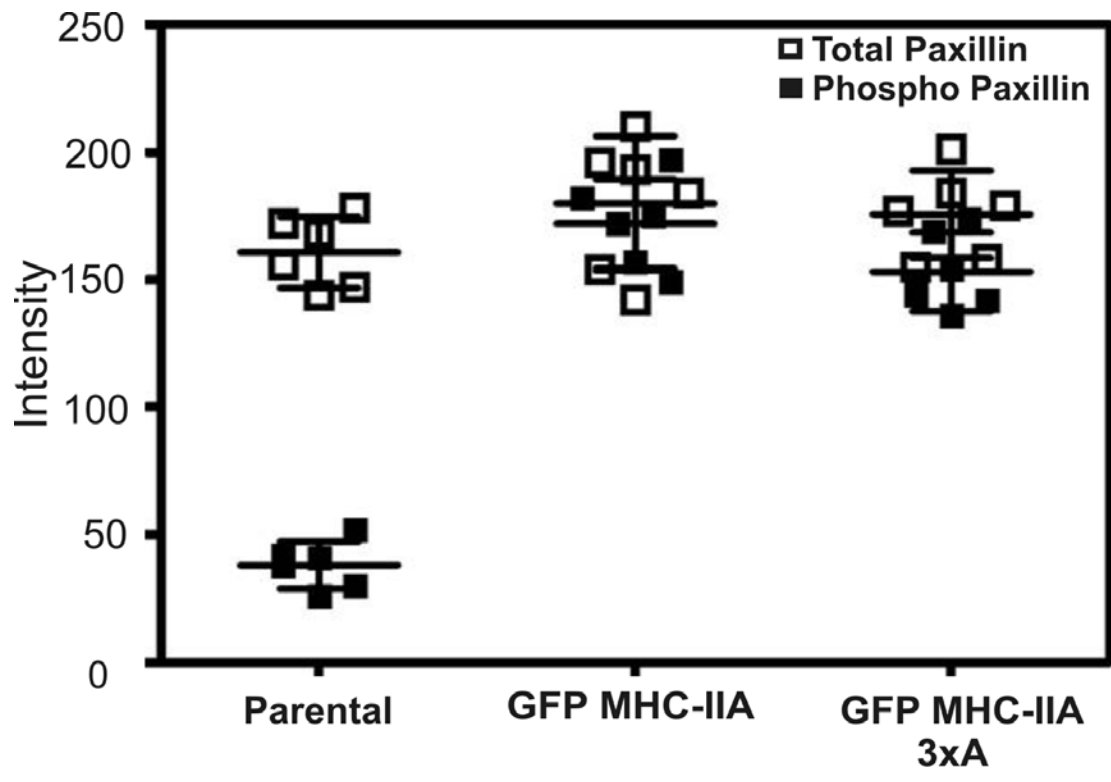
**Supplement Figure 3:** Scattered plot showing 3D invasion quantification as in figure 5B, the percent of DAPI signal greater than 40  $\mu\text{m}$  away from the coverslip was measured for 24 fields of view from three independent experiments performed on different dates. Data plotted as mean +/- SD.

**Supplement Figure 4:** Scattered plot represents number of new protrusions formed in 2D (panel A) and 3D (panel B) and maximum cell length in 3D collagen (panel C) of figure 6C, 6D and 6E respectively. For all graphs, data plotted as mean +/- SD.

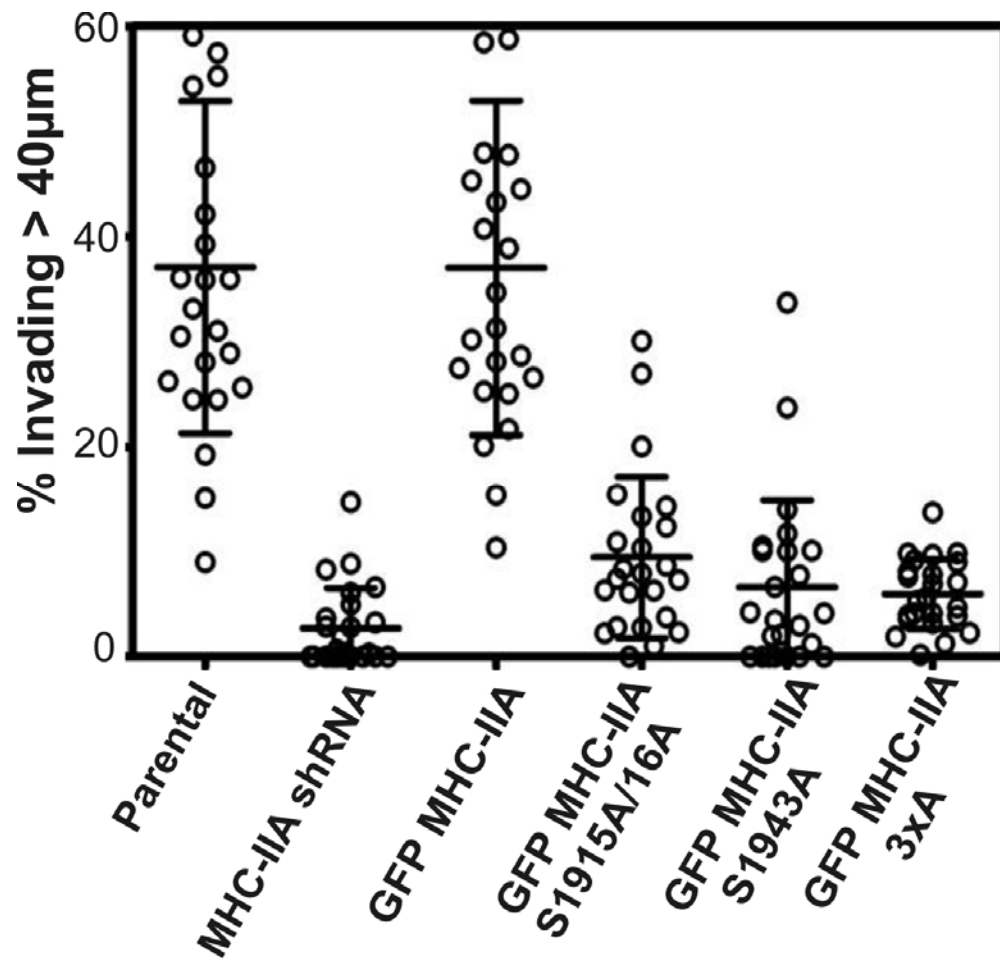
**Supplement Figure 5:** Scattered plot for maximum cell length (A) and number of protrusions/3hr (B) for all cell populations at each collagen concentration corresponding to figure 7B & 7C.



Supplement Figure 1

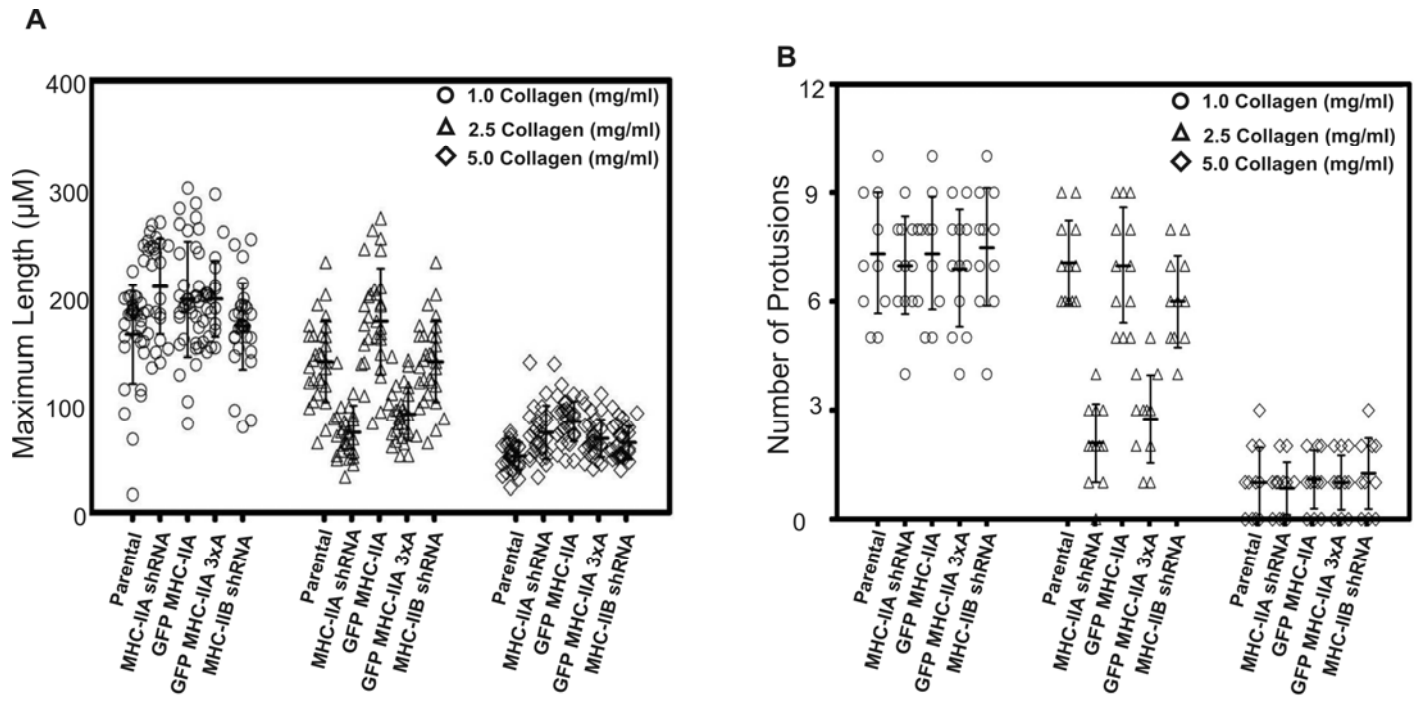


Supplement Figure 2



Supplement Figure 3





Supplement Figure 5