## **Description of Additional Supplementary Files**

File name: Supplementary Video 1

**Description:** Tracking phenotypic transition of a single cell. (Left panel) Fluorescence images of a single A549 cell stained with SiR-Actin at the specified time-points after addition of TGF $\beta$ 1 addition. (Right panel) OOP values extracted from the corresponding fluorescence image in the left panel.

File name: Supplementary Data 1

**Description:** Individual data points used to generate the figures in the main manuscript.