



**Supplemental Figure 1.** IGFBP1 ELISA assay of normal, stage I and IV eSFs used in the study. IGFBP1, as a marker for decidualization, was assessed in the conditioned media of eSF treated with E<sub>2</sub>+P<sub>4</sub> (Blue) or vehicle (orange) (0.1% ethanol) for 15 days, in duplicate which were averaged, and corrected to cell number. All normal eSF show robust decidualization (based on IGFBP1 marker product and morphological changes assessed by microscopy), while all disease eSF (stage I and IV) show virtually no decidualization.