



Supplementary Figure S1. Albumin uptake is dependent on macropinocytosis in ATC. **A**, Representative images (scale bar = 50 μ m) and quantification (means \pm s.e., one-way ANOVA/Dunnett compared to DMSO) of 4h 70kDa dextran uptake for 8505c cells pretreated with EIPA for 5 h ($n \geq 220$ cells across all cond.). **B**, Representative images (scale bar = 50 μ m) and quantification (means \pm s.e., one-way ANOVA/Dunnett compared to DMSO) of 4h 70kDa dextran and HSA uptake by TBP3743 cells pretreated with EIPA for 5 h ($n \geq 159$ cells across all conditions). **C**, Correlation between albumin uptake and geminin was assessed on a per-cell basis using TBP3743 expressing geminin-mCherry, measured after 4h treatment with fluorescent albumin ($n = 436$ cells, Pearson's correlation r , two-tailed t-test). **D**, Albumin uptake was determined after binning cells as either geminin-low (geminin signal a.u. < 500) or geminin-high (geminin signal a.u. \geq 500), averaging single-cell data within a given replicate shown as individual data points, and then comparing across replicates ($n = 9$ images, means \pm s.e., two-tailed t-test.). **E**, Quantification of the albumin uptake after 4 h incubation in live papillary thyroid cancer (PTC), follicular thyroid cancer (FTC), and anaplastic thyroid cancer (ATC) cell lines; data are shown as medians \pm interquartile range, and p-values are from a one-way ANOVA/Dunnett test compared to Nthy-ori-3-1 follicular thyroid cells; $n \geq 90$ cells. **F-G**, Microscopy quantification of 4 h albumin and dextran uptake in Nthy-ori-3-1 (**F**) and TPC1 (**G**) after pre-treatment with 100 μ M EIPA or 200 ng/ml fucoidan for 4h, $n = 9$ per cond., using one-way ANOVA/Dunnett test compared to DMSO control. **H-I**, Microscopy quantification of 4h albumin and dextran uptake in 8505c (**H**) and TBP3743 (**I**) after pre-treatment with 200 ng/ml fucoidan for 4h, $n = 9$ per cond., using two-tailed t-test.