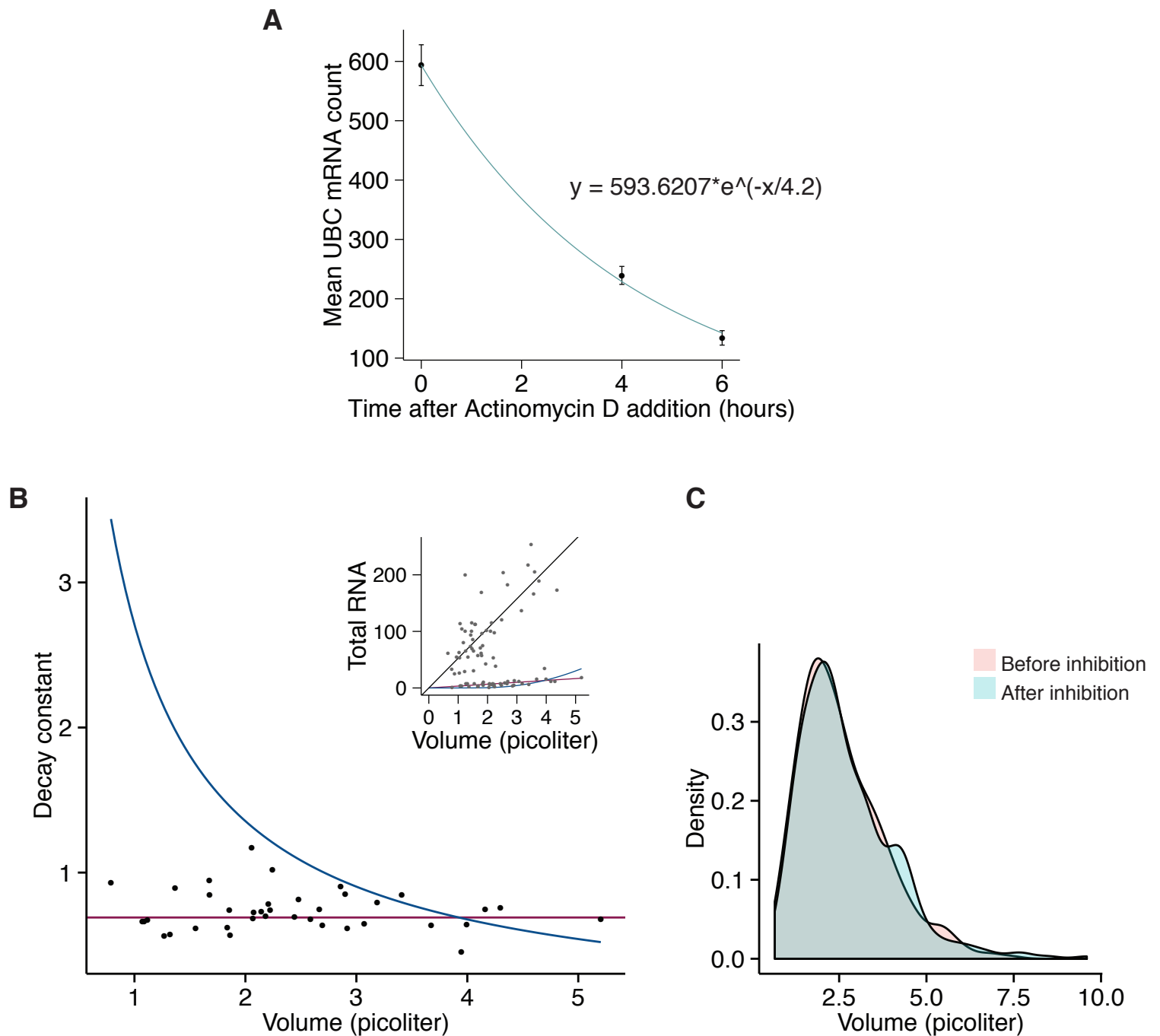


Supplementary Figure 11



Supplementary Fig. 11. Actinomycin D transcription inhibition controls.

A. RNA degrades exponentially when transcription is inhibited with Actinomycin D. Pictured is UBC mRNA 0, 4, and 6 hours after transcription block.

B. Degradation experiment with *IER2*. We inhibited transcription in CRL2097 cells using Actinomycin D for 4 hours and allowed RNA to degrade. Inset shows *IER2* before and after inhibition. Each point represents a single-cell measurement. We calculated the decay constant for each cell using the best-fit line before inhibition (see Methods). Blue line shows fit if degradation were volume-dependent; red line shows fit if transcription were volume-dependent. Data represent one of three biological replicates

C. Distribution of cell volumes before and after inhibition by Actinomycin D. The volume distribution is the same before and after we inhibit transcription. Although we cannot track a single cell before and after inhibition, this suggests that Actinomycin D likely does not change the volume of a cell, so it is appropriate to use the fit line before inhibition to calculate the decay constant. $n = 459$ cells before inhibition, 413 cells after inhibition.