Description of Additional Supplementary Files

File name: Supplementary Data 1

Description: All fitting parameters for all conditions and all experiments.

File name: Supplementary Data 2

Description: All derived response parameters from all conditions and experiments.

File name: Supplementary Movie S1

Description: Video of entire field of view of individual MDA-MB-231 cells treated with DMSO

proliferating throughout the duration of the experiment.

File name: Supplementary Movie S2

Description: Video of entire field of view of clusters of BT-474 cells treated with DMSO proliferating

throughout the duration of the experiment.

File name: Supplementary Movie S3

Description: Video of entire field of view of clusters of MCF7 cells treated with DMSO proliferating

throughout the duration of the experiment.

File name: Supplementary Movie S4

Description: Video of individual MDA-MB231 cell treated with DMSO.

File name: Supplementary Movie S5

Description: Video of a cluster of BT-474 cells treated with DMSO.

File name: Supplementary Movie S6

Description: Video of a cluster of MCF7 cells treated with DMSO.

File name: Supplementary Movie S7

Description: Video of individual MDA-MB231 cell treated with 2 μ M doxorubicin.

File name: Supplementary Movie S8

Description: Video of a cluster of BT-474 cells treated with 2 μ M doxorubicin.

File name: Supplementary Movie S9

Description: Video of a cluster of MCF7 cells treated with 20 μM fulvestrant.

File name: Supplementary Movie S10

Description: Video of MDA-MB-231 cell growing despite treatment with 20 μM docetaxel.