Supplementary Information

Multiplexed Nano-flares: mRNA Detection in Live Cells

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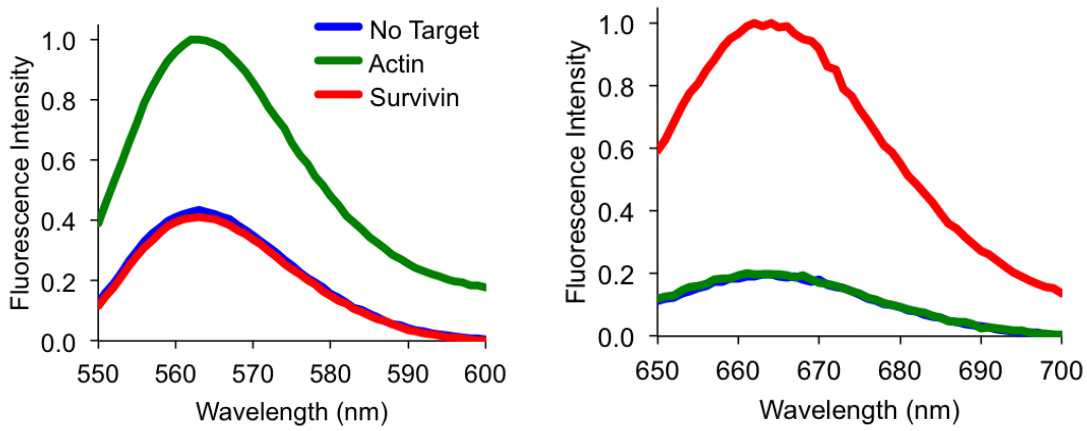

Figure S-1 Sequence-specific target detection in extracellular experiments using Cy5-survivin, Cy3-actin flares. Fluorescence spectra of multiplexed nano-flares in the presence of no target, actin target, or survivin target. (Left) Fluorescence spectra corresponding to Cy3 (actin flare) signal, with excitation at 530 nm. (Right) Fluorescence spectra corresponding to Cy5 (survivin flare) signal, with excitation at 630 nm.

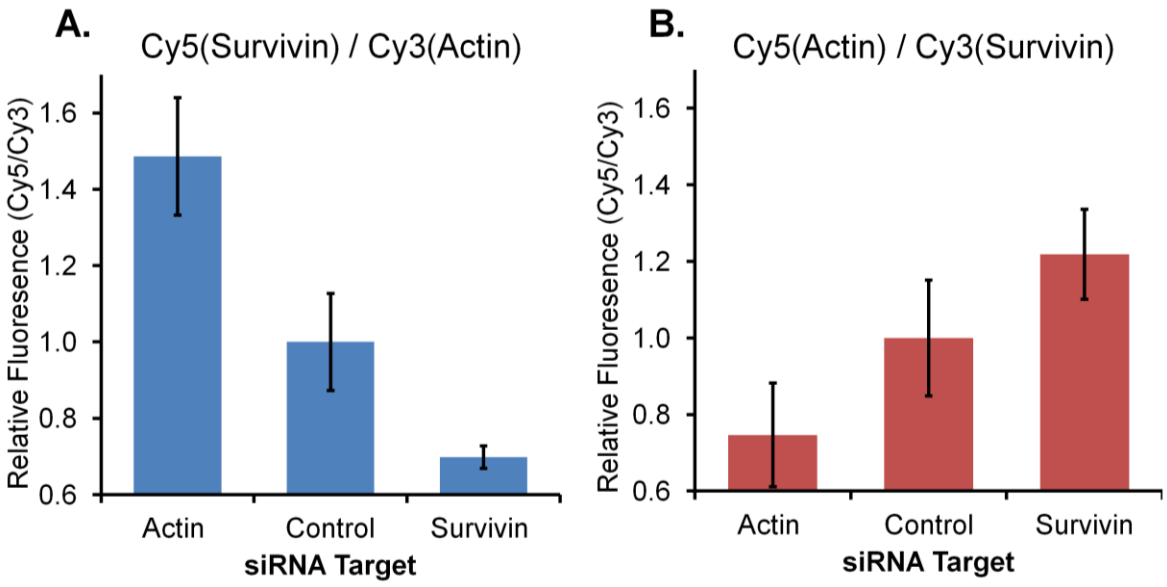

Figure S-2 Sequence-specific and fluorophore independent target detection in intracellular experiments. MCF-7 cells were treated with either actin-targeted siRNA, control siRNA, or survivin-targeted siRNA. Fluorescence intensities were observed using Cy5-survivin/Cy3-actin (left) and Cy5-actin/Cy3-survivin flares (right).

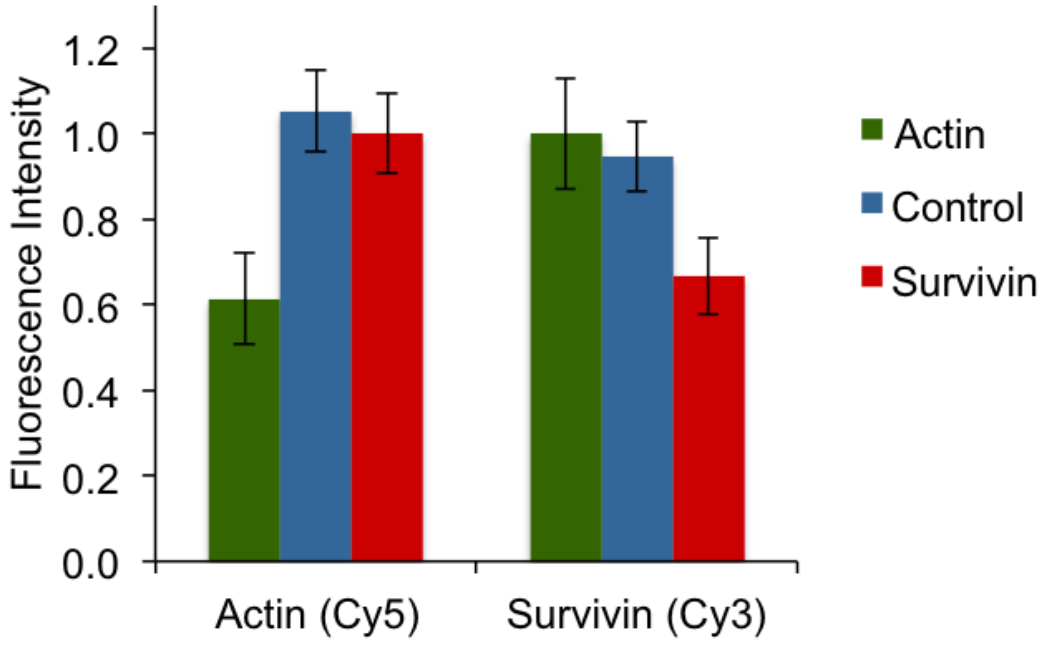

Figure S-3 Fluorescence intensities observed with MCF-7 cells treated with control, actin or survivin siRNA (100 nM). 1 nM multiplexed nano-flares used. (Cy3-survivin, Cy5-actin).

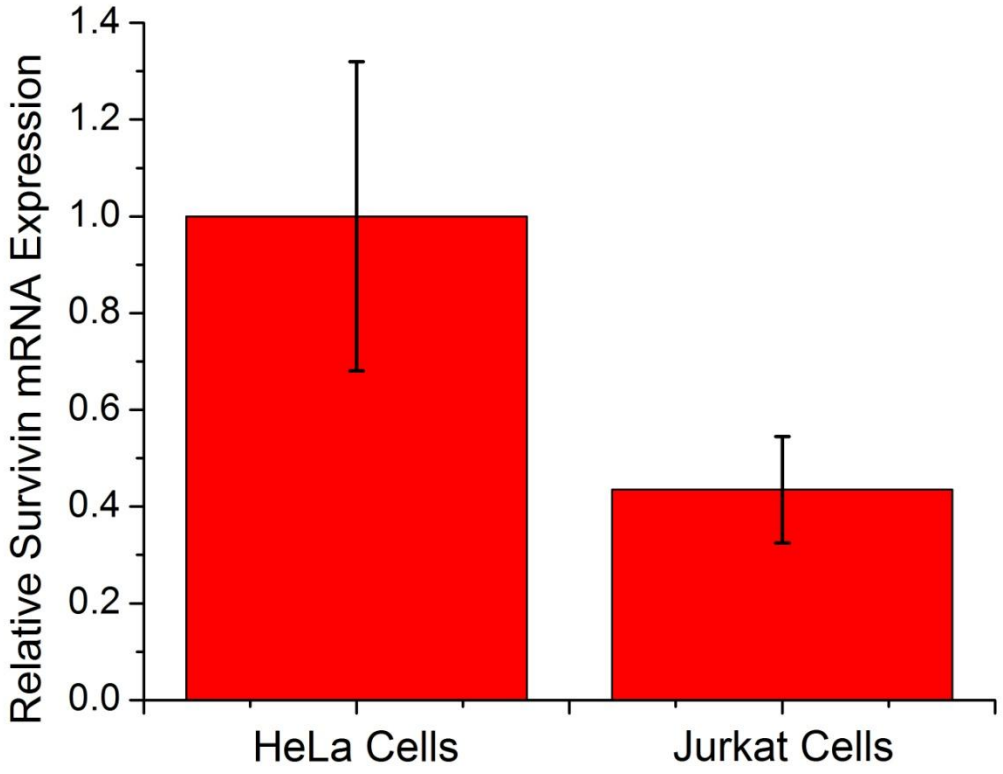

Figure S-4

The relative mRNA expression levels of survivin in untreated HeLa cells is experimentally found to be greater than that of Jurkat cells. RT-PCR was performed using actin as an internal control. p-value (student's T-test) < .02.

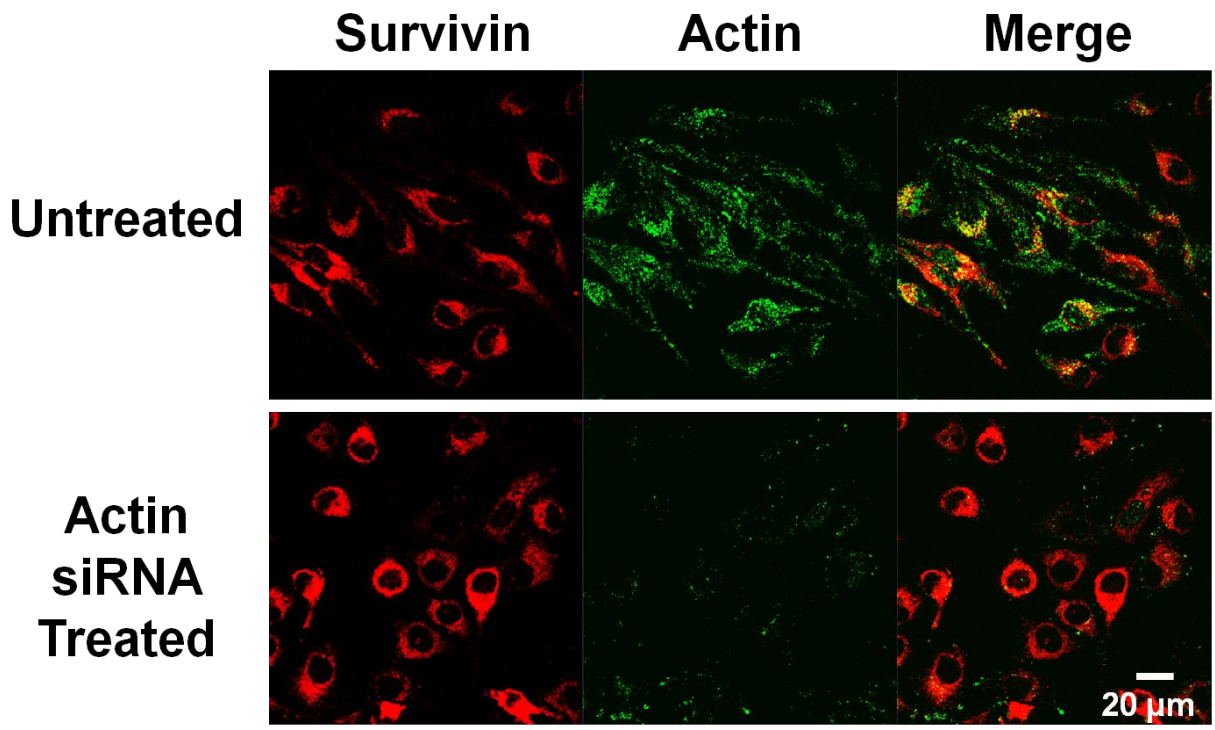

Figure S-5 Actin levels were reduced in HeLa cells using actin siRNA, and the change in fluorescence from the multiplexed nano-flares was measured and assessed qualitatively by fluorescence confocal microscopy.