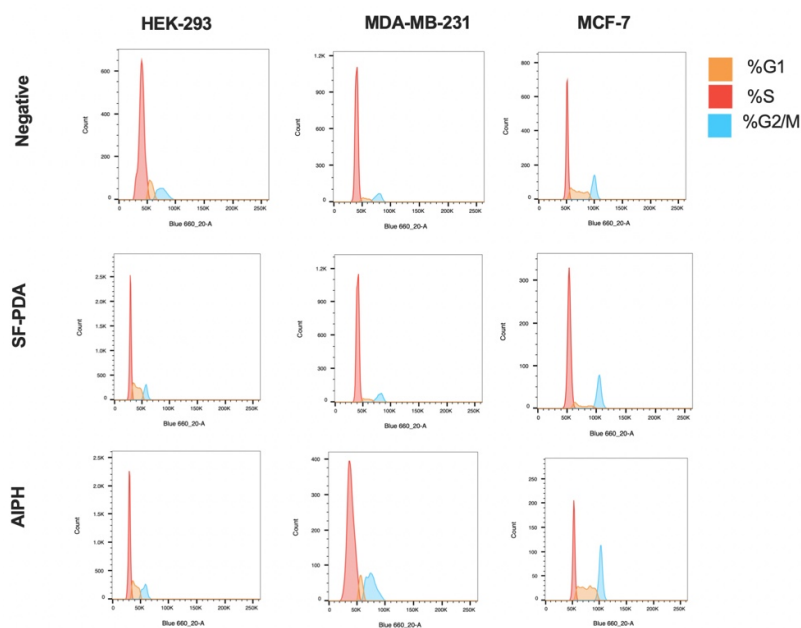


Article

Microfluidic-Assisted Silk Nanoparticles Co-Loaded with Epirubicin and Copper Sulphide: A Synergistic Photothermal-Photodynamic Chemotherapy Against Breast Cancer

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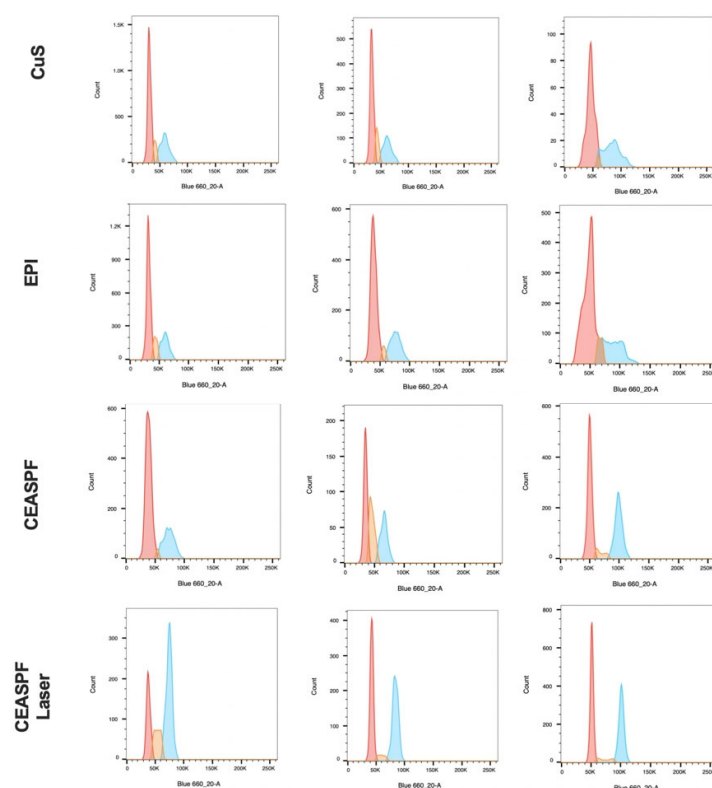


Figure S1 NIR light activation prompts designed CEASPF NPs to disrupt cancer cell growth by specifically interfering with the G2/M phase of the cell cycle. Flow cytometry cell cycle analysis of MDA-MB-231, MCF-7 breast cancer cells, and HEK-293 human embryonic kidney cells treated with negative control and 100 $\mu\text{g/mL}$ of SF-PDA, CEASPF (CuS-EPI-AIPH@SF-PDA-FA with and without NIR irradiation) and free AIPH, CuS, and EPI for 24 h of incubation. Error bars are hidden in the bar when not visible; data are mean \pm SD, $n \geq 3$. (* $p < 0.03$, ** $p < 0.002$, *** $p < 0.0002$, **** $p < 0.0001$).

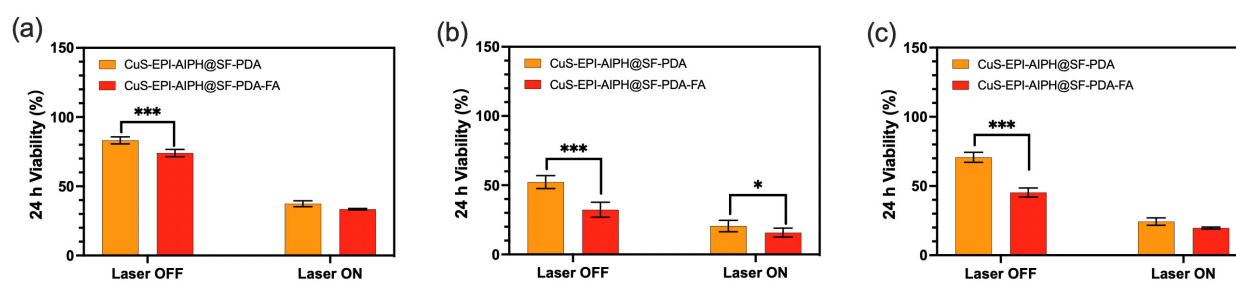


Figure S2 The cytotoxicity of 100 $\mu\text{g/mL}$ CuS-EPI-AIPH@SF-PDA and CuS-EPI-AIPH@SF-PDA-FA nanoparticles was assessed in (a) HEK-293 human embryonic kidney cells, (b) MCF-7 human breast cancer cells, and (c) MDA-MB-231 human breast cancer cells after 24 hours of treatment, with and without 808 nm NIR exposure for 5 minutes at an intensity of 2 W/cm^2 . Error bars are not visible when hidden in the bar; data are presented as mean \pm SD, with $n \geq 3$. (* $p < 0.03$, ** $p < 0.002$, *** $p < 0.0002$, **** $p < 0.0001$).

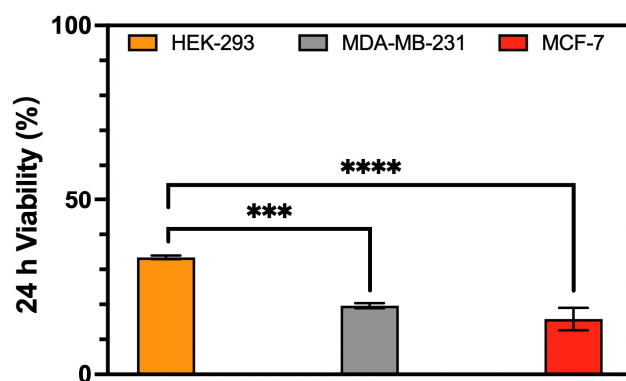


Figure S3 The cytotoxicity of 100 $\mu\text{g/mL}$ CuS-EPI-AIPH@SF-PDA-FA nanoparticles was assessed in HEK-293 human embryonic kidney cells, MDA-MB-231 human breast cancer cells, and MCF-7 human breast cancer cells after 24 hours of treatment, with 808 nm NIR exposure for 5 minutes at an intensity of 2 W/cm^2 . Error bars are not visible when hidden in the bar; data are presented as mean \pm SD, with $n \geq 3$. (* $p < 0.03$, ** $p < 0.002$, *** $p < 0.0002$, **** $p < 0.0001$).