

Monitoring and Regulating Intracellular GPX4 mRNA Using Gold Nanoflare Probes and Enhancing Erastin-Induced Ferroptosis

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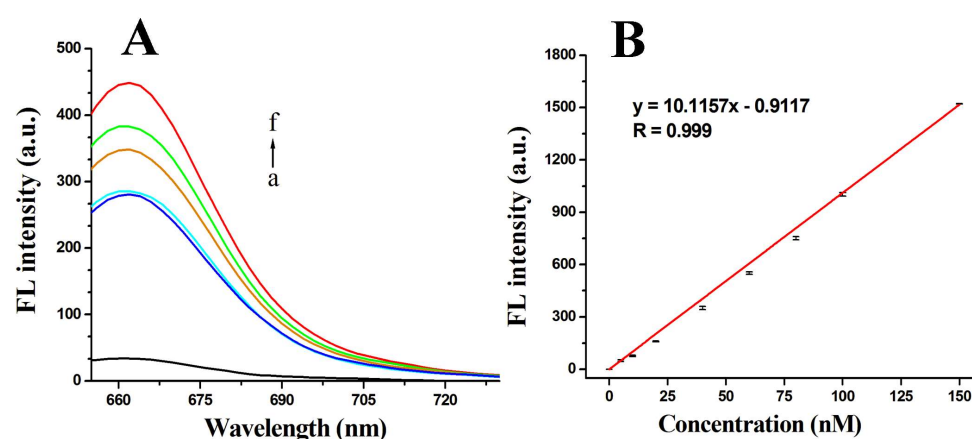


Figure S1. (A) Fluorescence recovery of AuNF-probes incubated with different concentrations of mercaptoethanol (0, 0.2, 0.5, 1, 20, 50 μ M). (B) Standard curves of the fluorescence intensity of HS-DNA/Flare-DNA duplexes (0, 5, 10, 20, 40, 60, 80, 100, 150 nM).

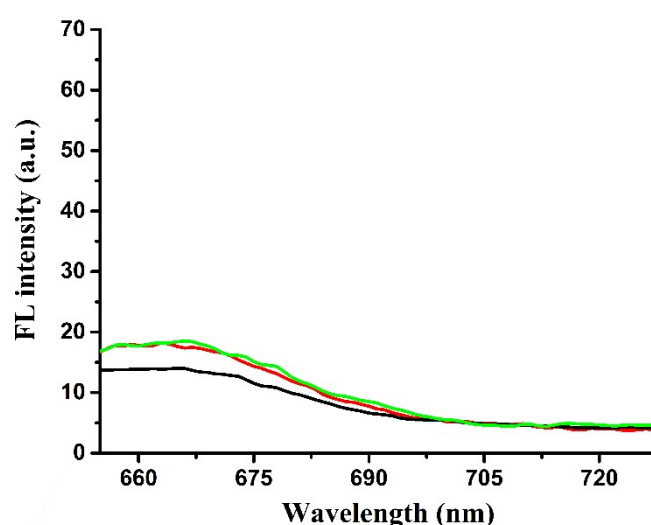


Figure S2. Fluorescence spectra of AuNF-probes incubated with different concentrations of Random-DNA (0, 100, 300 nM).

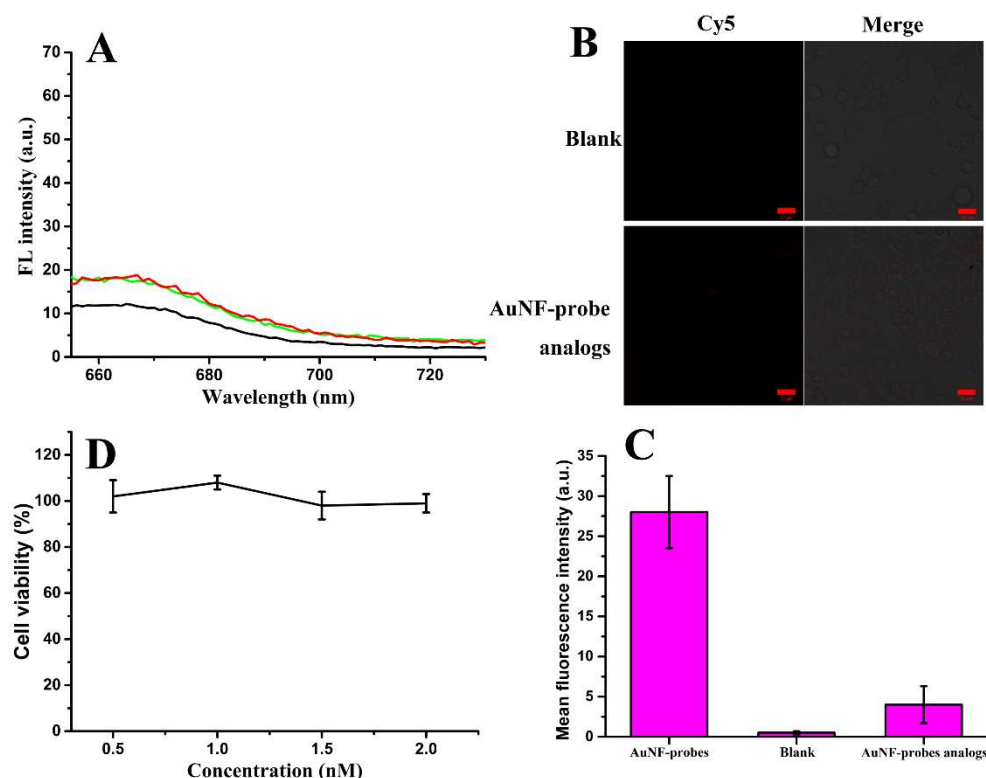


Figure S3. (A) Fluorescence spectra of AuNF-probe analogs incubated with different concentrations of Target-DNA (0, 100, 300 nM). (B) Confocal fluorescence images of HeLa cells that were treated with or without AuNF-probe analogs (1.5 nM) for 4 h. (C) Mean fluorescence intensity of HeLa cells that shown in Figures S2B and 4A. (D) Viabilities of HeLa cells when treated with different concentrations of AuNF-probe analogs (0.5, 1.0, 1.5, 2.0 nM) for 48 h.

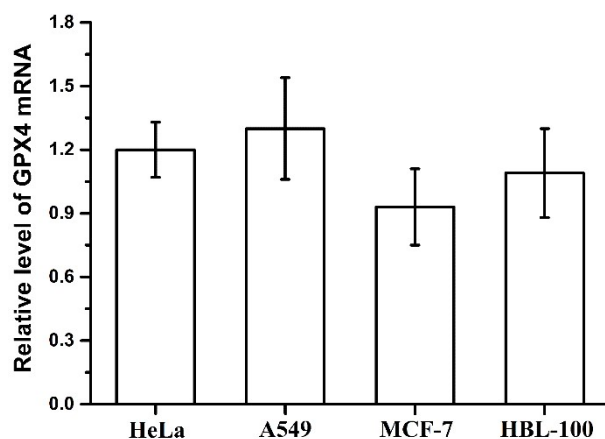


Figure S4. qRT-PCR analysis of GPX4 mRNA content in HeLa, A549, MCF-7, and HBL-100 cells.

Table S1. IC₅₀ values of erastin against five different cancer cell lines.

	HeLa	A549	HepG2	MCF-7	MDA-MB-231
erastin	2.32 ± 0.34	5.41 ± 0.34	3.83 ± 0.64	10.89 ± 0.23	10.24 ± 0.42

Table S2. Inhibition rate of different systems on the proliferation of different cancer cells at 48 h.

	HeLa	A549	HepG2	MCF-7	MDA-MB-231
AuNF-probes	8.41 ± 5.06	16.62 ± 2.98	8.46 ± 3.06	5.58 ± 4.76	3.66 ± 2.76
erastin	24.12 ± 6.11	49.54 ± 4.72	54.81 ± 4.11	3.69 ± 8.15	12.58 ± 9.14
AuNF-probes + erastin	57.19 ± 4.17	63.18 ± 3.17	68.19 ± 3.17	25.32 ± 3.66	39.65 ± 5.69