Supporting Information

Multifunctional Gold Nanoparticles Overcome MicroRNA Regulatory Network Mediated-Multidrug Resistant Leukemia

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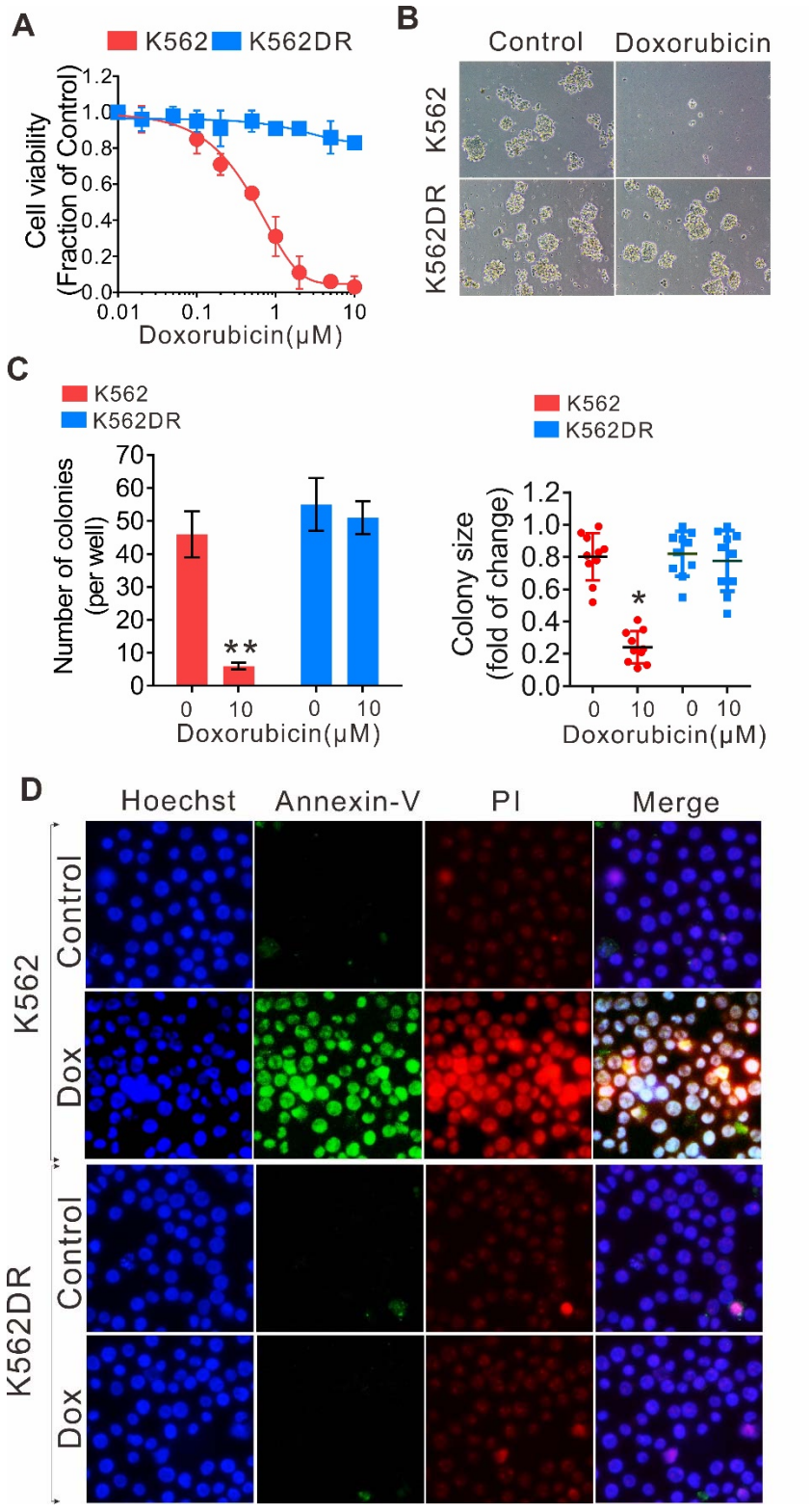


Figure S1. Characterization of K562 drug-resistant cells. (A) CCK-8 assays for cell proliferation in parental K562 and resistant cells treated with doxorubicin for 72 hours. The data represent three independent experiments with three repeats in total. (B) Colony-forming assays in parental cells treated with 10 μM doxorubicin or PBS control. Photographs show representative clones. (C)

Graphs indicate the colony number from 3 independent experiments (left) and quantification of clone sizes from ten clones (right). Data are mean ±SD; **P*<0.05, ***P*<0.01. (D) Fluorescence assay for apoptosis in K562 or K562DR cells treated with 10 μM doxorubicin or PBS control for 24 hours (blue, hoechst; green, Annexin-V; red, PI).

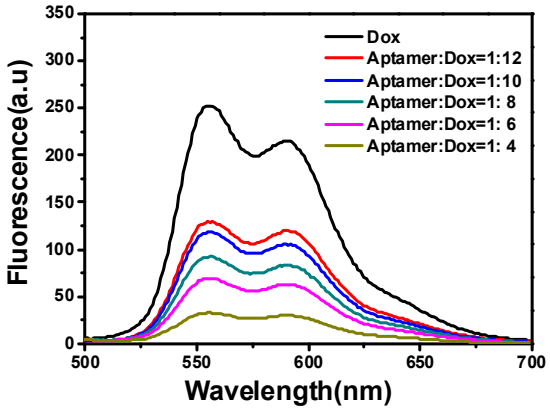
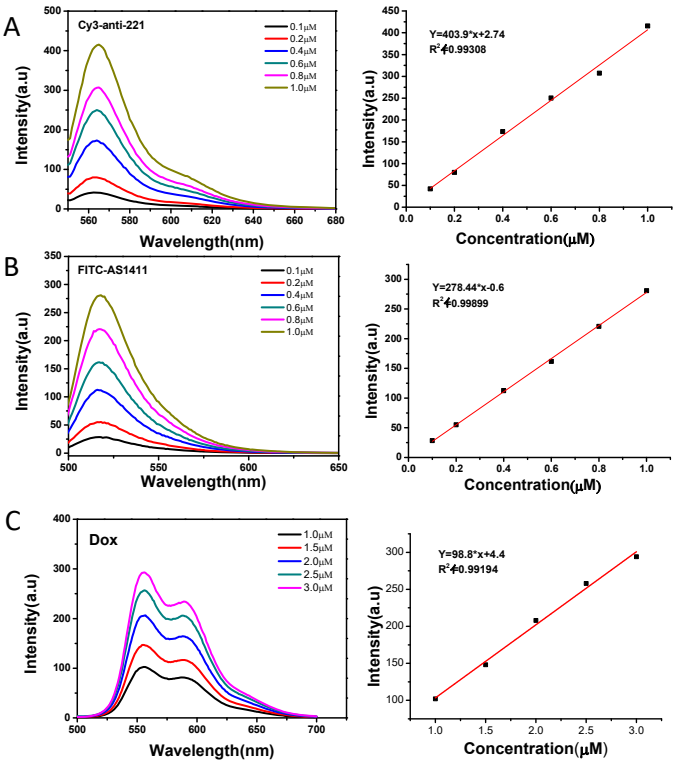


Figure S2. Flourescence for the interaction between DOX and AS1411. Fluorescence spectra of Dox when they were conjugated with AS1411 under different molar ratios.



D

Type / Measurement	AS1411	anti221	Dox
1	103/200	101/200	284/500
2	106/200	95/200	292/500
3	112/200	106/200	281/500
SEM	4.6	5.5	5.7
Average	107	101	286

Figure S3. Estimation of the loading capacity of AS1411, anti-221 and DOX on the surface of gold nanoparticles. (A-C) Fluorescence spectra and standard curves of AS1411, anti-221 and DOX in the PBS buffer. (D) Summary of the loading number of AS1411, anti-221 and DOX on the surface of gold nanoparticles (mol per particle).

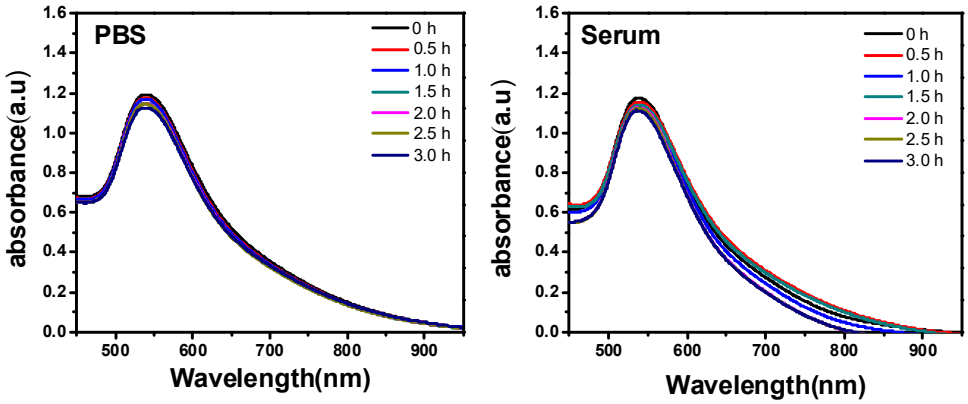


Figure S4. The stability of the NPsFA- AS1411/DOX/a221 in PBS and serum for 3 h.

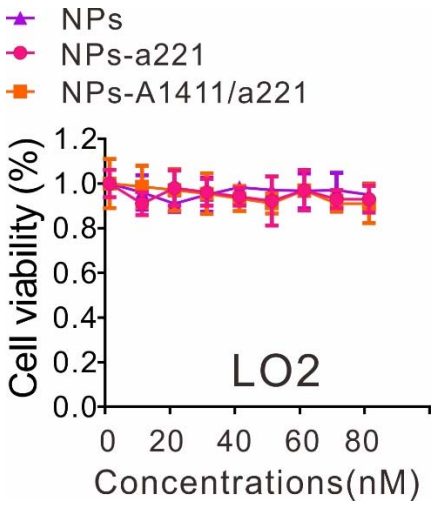


Figure S5. Nanoparticles have no effect on LO2 cells. CCK-8 assays for cell proliferation in LO2 cells treated with different doses of indicated nanoparticles for 72 hours. The data represent 3 independent experiments with 3 repeats in total.

Full-length gels

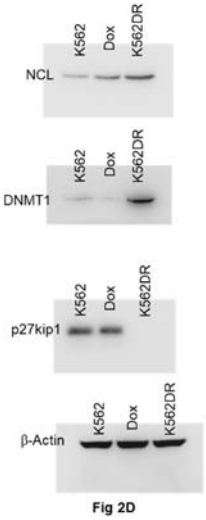


Fig 2D

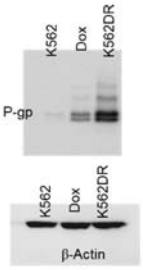


Fig 2F

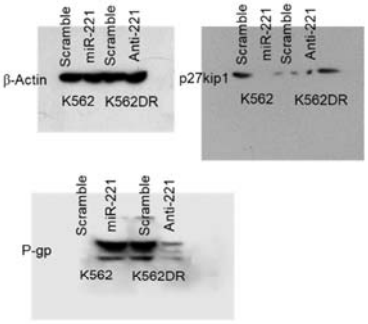


Fig 2H

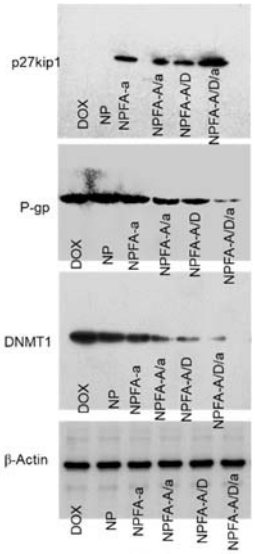


Fig 5C