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Supporting Information

An activatable DNA nanodevice for correlated imaging of apoptosis-related dual proteins

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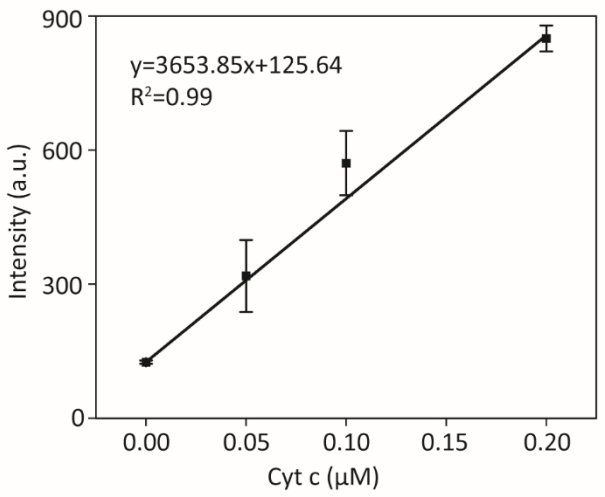

Figure S1. Fluorescence intensity of E-Apt in the presence of APE1 (1 U/mL) under low concentrations of Cyt c. Error bars were estimated from three replicate measurements. The LOD was calculated based on 3σ/slope rule.

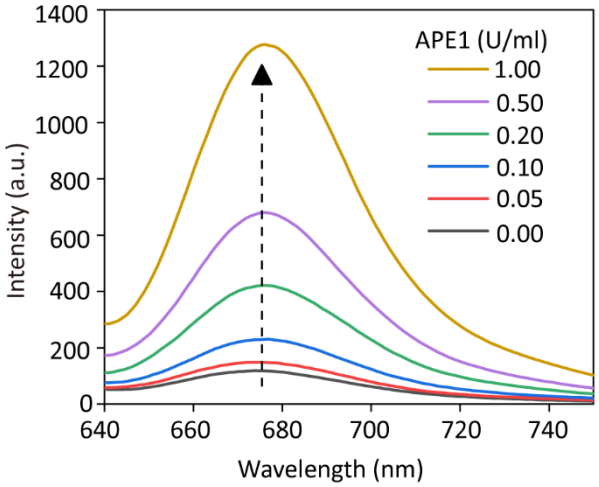

Figure S2. Fluorescence spectra of E-Apt (50 nM) responding to various concentrations of APE1 (from 0 to 1 U/mL) in the presence of Cyt c (5 μM).

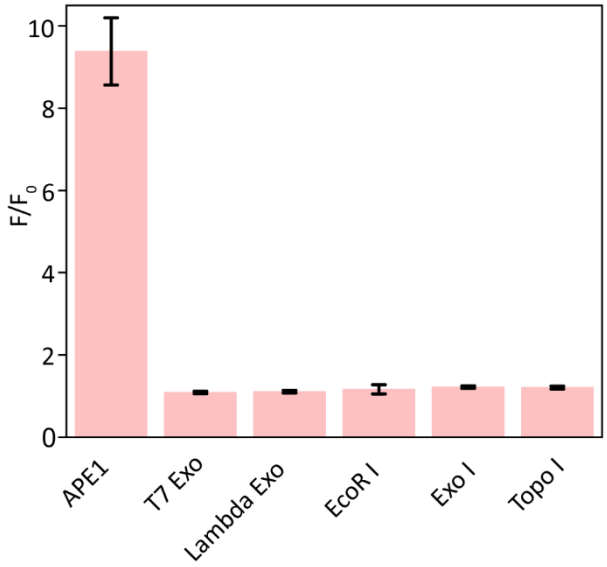

Figure S3. Sensing selectivity of E-Apt to different DNA-related enzymes (1 U/ml). Data are represented as means ± SD (n = 3).

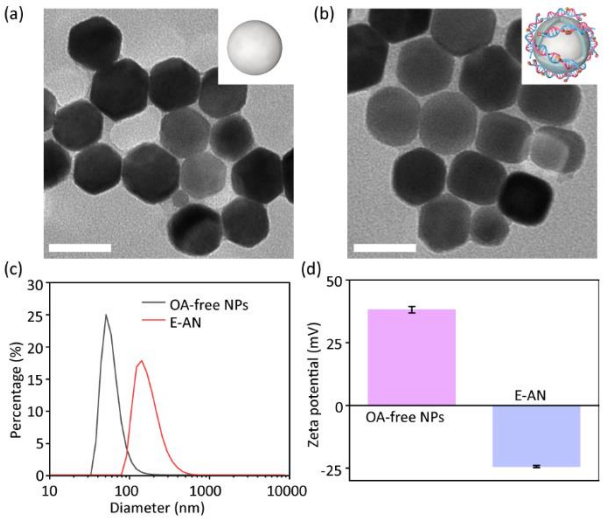

Figure S4. TEM image of the OA-free NPs (a) and E-AN (b). Scale bars: 50 nm. (c) Hydrodynamic size distribution and (d) zeta potential value of the NPs before and after loading with E-Apt. Data are represented as means ± SD (n = 3).

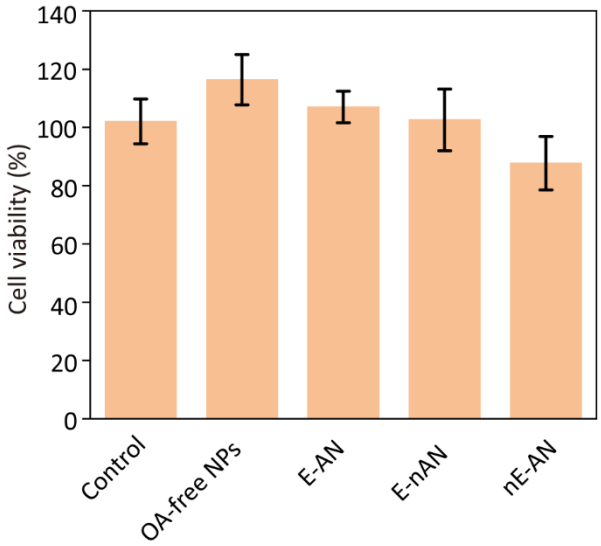

Figure S5. Cell viability of HOS cells with different treatment. The concentration of the DNA probes was 100 nM. Data are represented as means ± SD (n = 3).

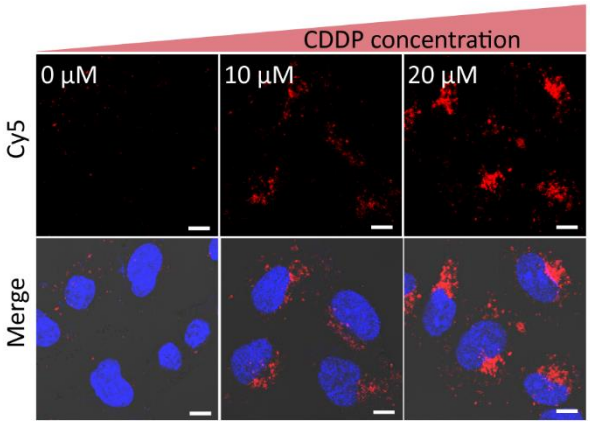

Figure S6. Confocal images of HOS cells incubated with different concentrations of CDDP for 24 h following by incubation with E-AN for 4 h. Scale bar: 10 μm.

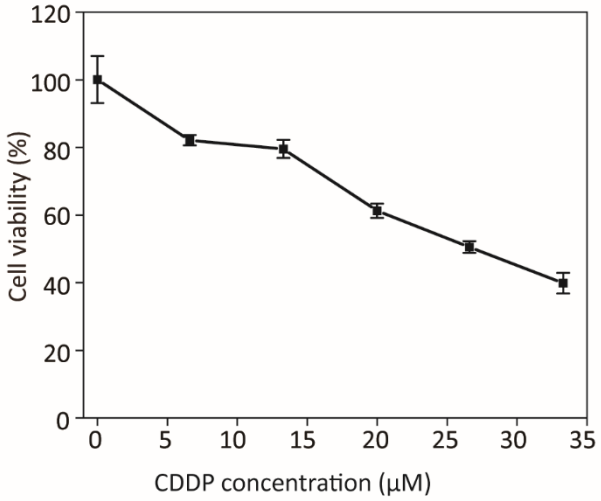

Figure S7. Effect of CDDP on HOS cell viability by CCK-8 assay.

Table S1. The oligonucleotides sequences used in this study (from left to right 5'-3'), '*' denotes phosphorothioate. 'X' denotes AP site.

Name	Sequence (5'-3')
Cyt c Aptamer	Cy5-C*C*G* T*G*T CTG GGG CCG ACC GGC GCA TTG GGT A*C*G *T*T*G *T*T*G *C
Enzyme strand for E-Apt	C* G*G*T CGX CCC CAG ACA *C*G*G-BHQ3
Cyt c Nonaptamer	Cy5-C*C*G *T*G*T CTG GGG CCG ACC GGT AGC GCC GCC G*T*A *T*A*C*T*C*A* C
Enzyme strand for nE-Apt	C* G*G*T CGG CCC CAG ACA *C*G*G-BHQ3