Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting Information

FRET investigation toward DNA tetrahedron-based ratiometric analysis of intracellular telomerase activity

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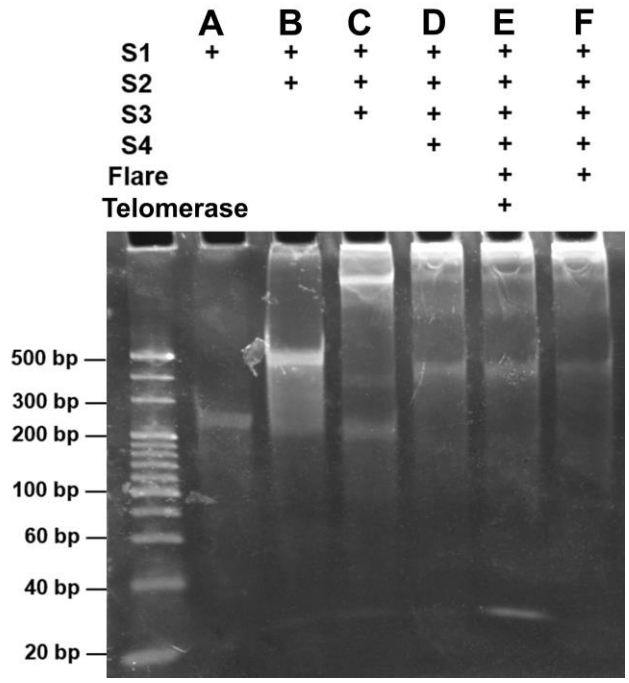

Fig. S1 Gel electrophoresis analysis of six samples formed by different DNA probes. Lane A is strand S1; lane B is strand S1+S2; lane C is strand S1+S2+S3; lane D is strand S1+S2+S3+S4; lane E is strand S1+S2+S3+S4+Flare+telomerase; lane F is strand S1+S2+S3+S4+Flare.

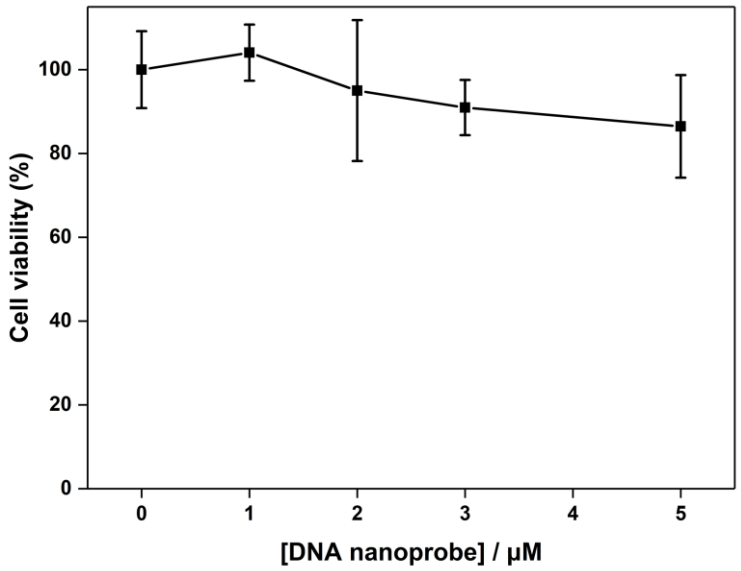

Fig. S2 Cytotoxicity of different concentrations of DNA nanoprobe exposed to the cells for 24 h.

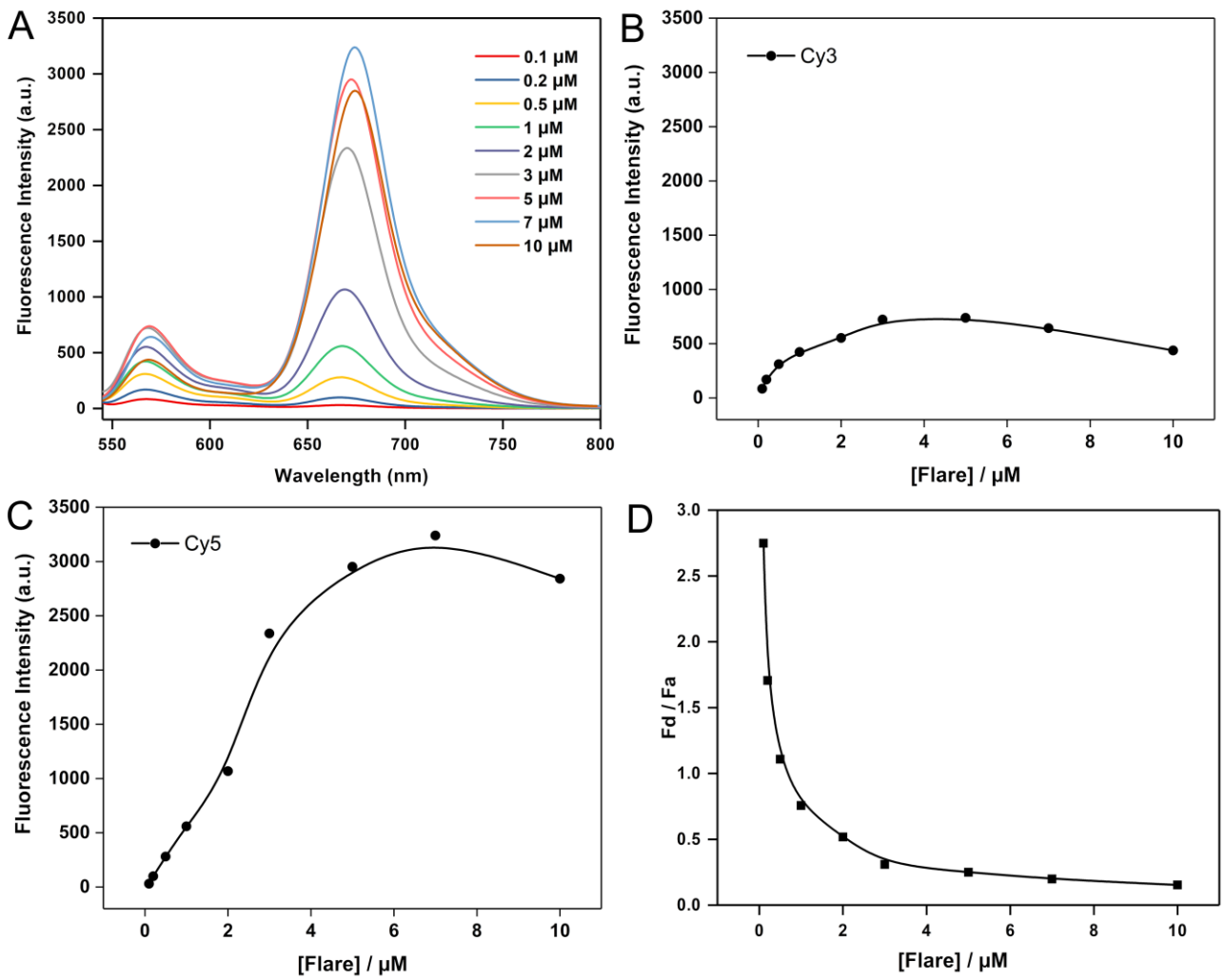

Fig. S3 (a) Fluorescence spectra of Flare with different concentrations. (b) The relationship between peak intensity at 565 nm (Cy3) and Flare concentration. (c) The relationship between peak intensity at 662 nm (Cy5) and Flare concentration. (d) The relationship between the peak intensity ratio of donor to acceptor (F_d/F_a) and Flare concentration.

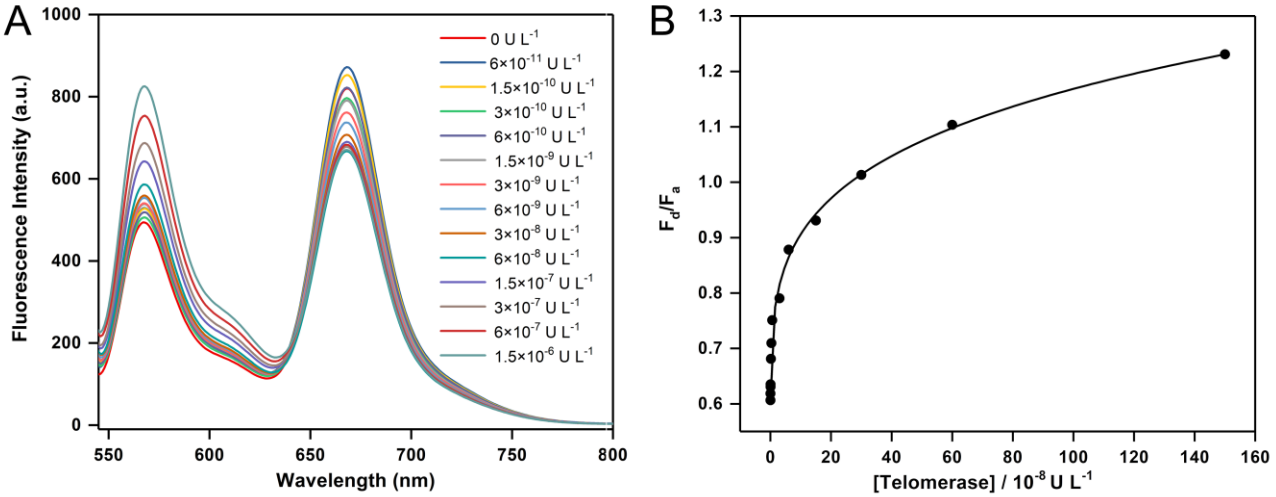

Fig. S4 (A) Fluorescence responses in the presence of different concentrations of telomerase from the Kit. (B) Calibration curve reflecting the relationship between F_d/F_a and telomerase concentration.

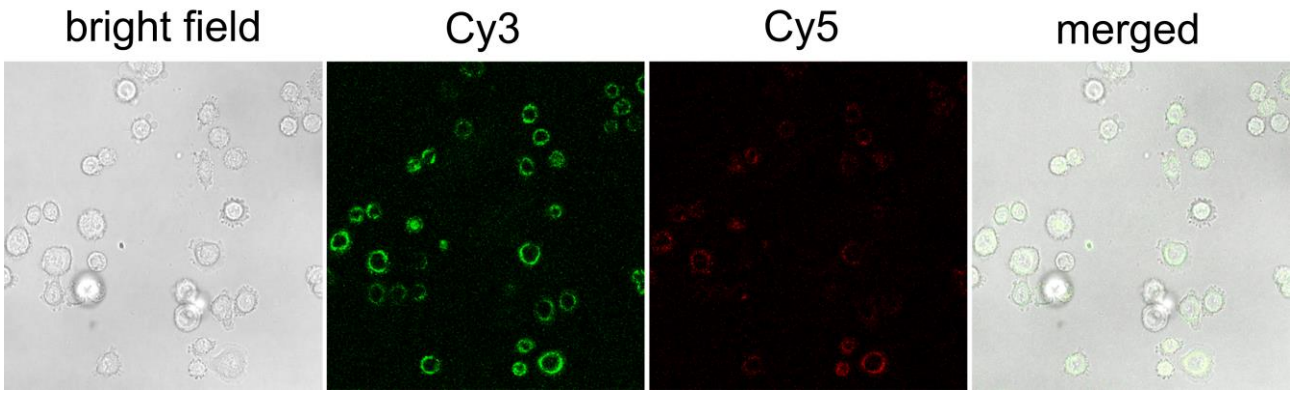

Fig. S5 Confocal images of DNA nanoprobe delivered into SW480 cells.

Table S1 DNA sequences used in this study.[α]

Name	Sequence (from 5' to 3')
S1	ACATTCCTAAGTCTGAAGAAGAGCCGCCATAGTACCTCAGCCAACCCTAACCCT AACCCTAACCCTAAAACTCTGCTCGACGGATTCCTTCCCACGTAGTGTCGTTATC ACCAGGCAGTTGATTGCGCAA
S2	ATGCGAGGGTCCAATACGCACCTGAGACGCGTTACGCATGACCCGAACTGGTCC CGTCTACTTACCGGCGACAGTCGTTAAGCTGAAATTGCGCAATCAACTGCCTGG TGATAACGACACTACGTGGGAA
S3	ATTACAGCTTGCTACACCAACTAGAATGATCGGCTACAGACGAAGGCTGAGGTA CTATGGCGGCTCTTCTTCAGACTTAGGAATGTCCTCAGCTTAACGACTGTCGCCG GTAAGTAGACGGGACCAGTTC
S4	CGTCTGTAGCCGATCATTCTAGTTGGTGTAGCAAGCTGTAATCCGTCATGCGTAA CGCGTCTCAGGTGCGTATTGGACCCTCGCATCCAATCCGTCGAGCAGAGTT
Flare	Cy3-ATACACAGGGGGCCAAAGGGTTCTCAAT-Cy5

[α] The underlined sequences are complementary with each other.