Supporting Information

Target-controlled in-situ formation of G-quadruplex DNAzyme for

sensitively visual assay of telomerase activity

Yaocai Wang, Luzhu Yang, Yanjun Wang, Wei Liu, Baoxin Li and Yan Jin*

Key Laboratory of Applied Surface and Colloid Chemistry, Ministry of Education,

Key Laboratory of Analytical Chemistry for Life Science of Shaanxi Province, School

of Chemistry and Chemical Engineering, Shaanxi Normal University, Xi'an 710062,

China

* Corresponding author: Prof. Yan Jin, Key Laboratory of Applied Surface and

Colloid Chemistry, Ministry of Education, Key Laboratory of Analytical Chemistry

for Life Science of Shaanxi Province, School of Chemistry and Chemical

Engineering, Shaanxi Normal University

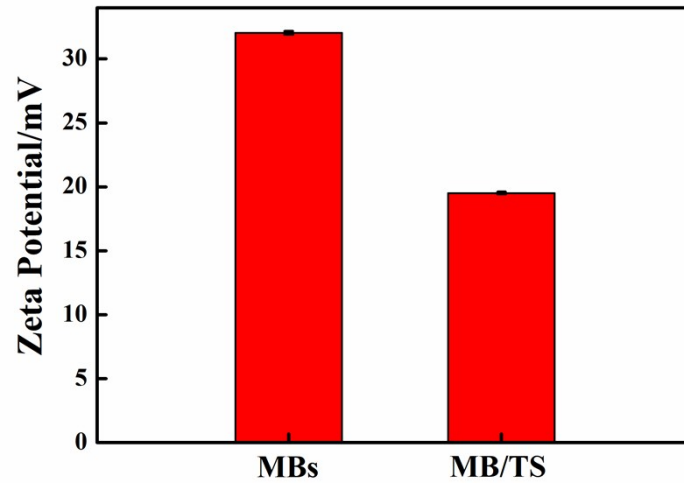Email: jinyan@snnu.edu.cn, Fax: 86-29-81530727, Tel: 86-29-81530726

Fig. S1. Zeta potential of MBs and MB/TS. Error bars were calculated from three replicates.
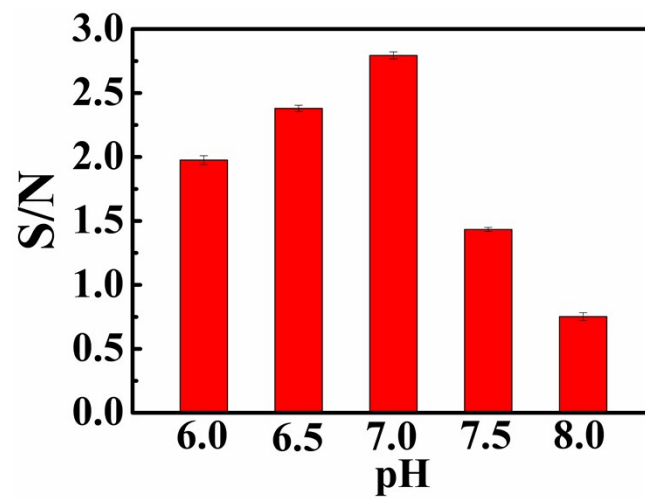

Fig. S2. Effect of pH on S/N ratio. Cell extract of 200 HeLa cells was used. Error bars were calculated from three replicates.
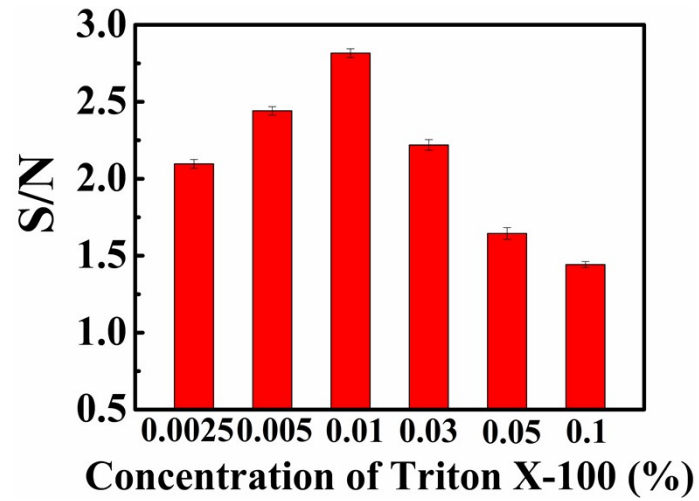
Fig. S3. Effect of Triton X-100 concentrations on S/N ratio. Cell extract of 200 HeLa cells was used. Error bars were calculated from three replicates.
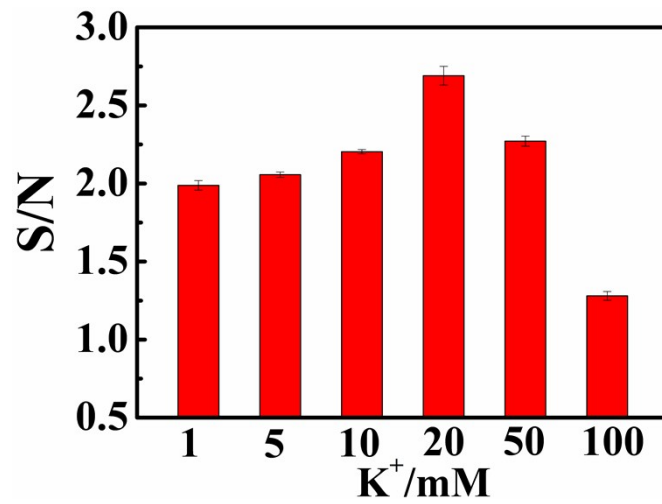

Fig. S4. Effect of K^+ concentration on S/N ratio. Cell extract of 200 HeLa cells was used. Error bars were calculated from three replicates.
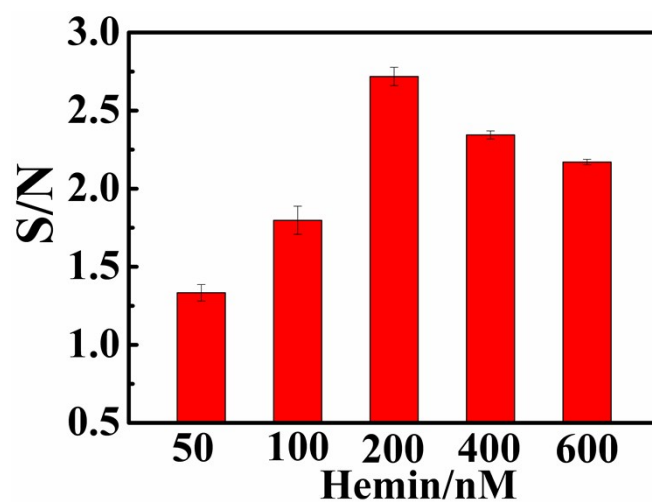
Fig. S5. Effect of hemin concentration on S/N ratio. Cell extract of 200 HeLa cells was used. Error bars were calculated from three replicates.
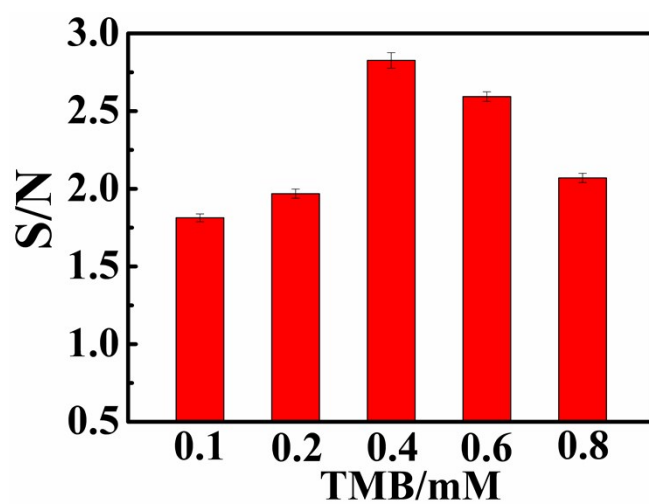

Fig. S6. Effect of TMB concentration on S/N ratio. Cell extract of 200 HeLa cells was used. Error bars were calculated from three replicates.
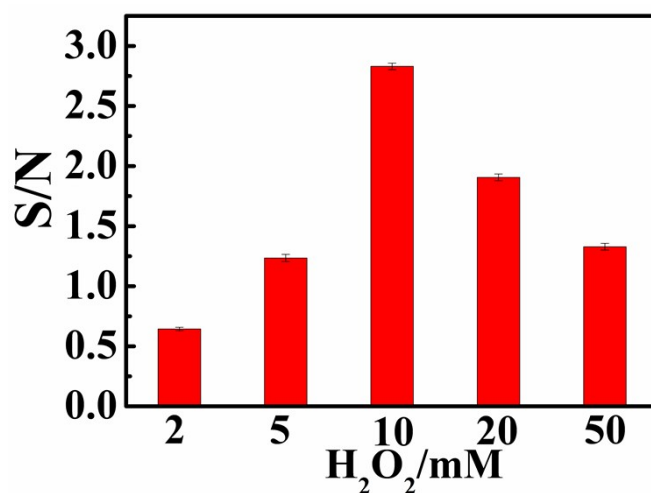
Fig. S7. Effect of H_2O_2 concentration on S/N ratio. Cell extract of 200 HeLa cells was used. Error bars were calculated from three replicates.

Table S1. Comparison of colorimetric assays for detecting telomerase activity.

Ref.	LOD (naked eye)	LOD (UV-vis spectrometer)	Detection in complex matrix
(1)	10 HeLa cells/μL	1 HeLa cell/μL	No
(2)	1000 HeLa cells	100 HeLa cells	No
(3)	6 MCF-7 cells/μL	Not mentioned	Yes
(4)	100 HL-60 cells/mL	29 HL-60 cells/mL	No
(5)	Not mentioned	0.2 HeLa cells/μL	No
(6)	Not mentioned	27 293T cells/μL	No
(7)	Not mentioned	10 cells/mL	No
(8)	Not mentioned	~ 500 HeLa cells	No
(9)	Not mentioned	~ 200 293T cells/μL	No
(10)	Not mentioned	200 HeLa cells	No
(11)	Not mentioned	60 HeLa cells/mL	Yes
(12)	20 HeLa cells	5 HeLa cell	Yes
(13)	Not mentioned	90 HeLa cells/mL	Yes
(14)	Not mentioned	100 HeLa cells	Yes
(15)	20 HeLa cells	Not mentioned	Yes

| (16) | 250 HeLa cells | 25 HeLa cells | Yes |
| This work | 1 HeLa cell/μL | 0.5 HeLa cell/μL | Yes |

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