Electronic Supplementary Material (ESI) for Analyst.

Supporting information

A G-quadruplex DNAzyme based colorimetric method for facile detection of *Alicyclobacillus acidoterrestris*

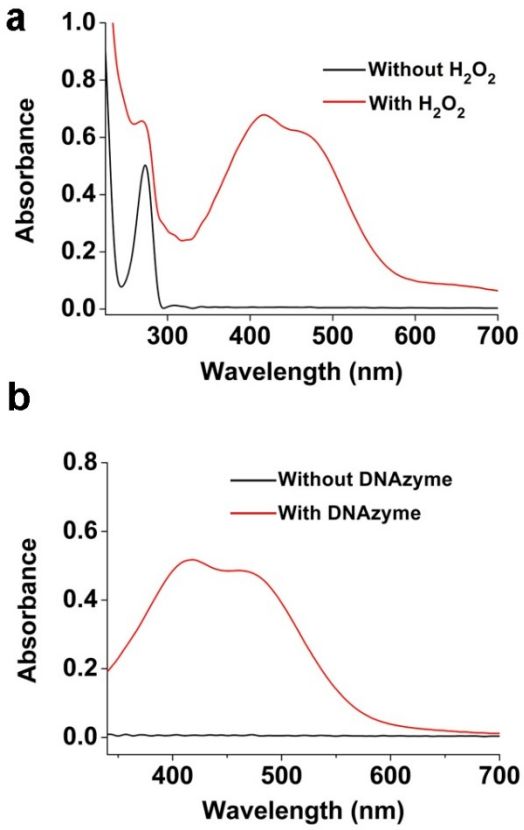

Fig. S1 (a) UV-vis absorption spectra of probe solution (25 mM KHP-NaOH, 0.5 μM DNA, 1 μM hemin, 0.05% Triton X-100 (v/v), 150 mM NaCl, 20 mM KCl, and 1 mM guaiacol, pH 5) in the absence of H_2O_2 and in the presence of 4 mM H_2O_2. (b) UV-vis absorption spectra of probe solution (25 mM KHP-NaOH, 0.05% Triton X-100 (v/v), 150 mM NaCl, and 1 mM guaiacol and 4 mM H_2O_2, pH 5) with DNAzyme and without DNAzyme.

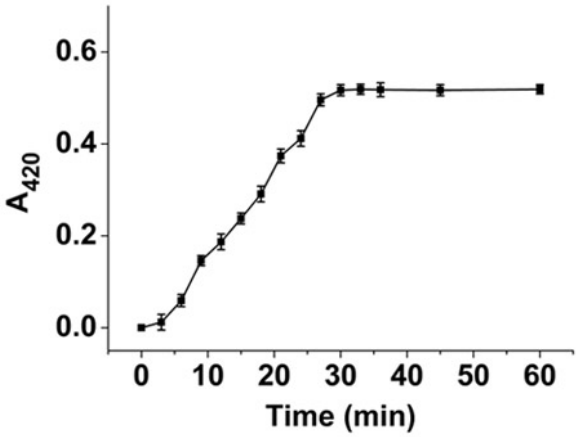

Fig. S2 Time-dependent absorbance changes at 420 nm to analyze the guaiacol catalytically polymerized reaction.

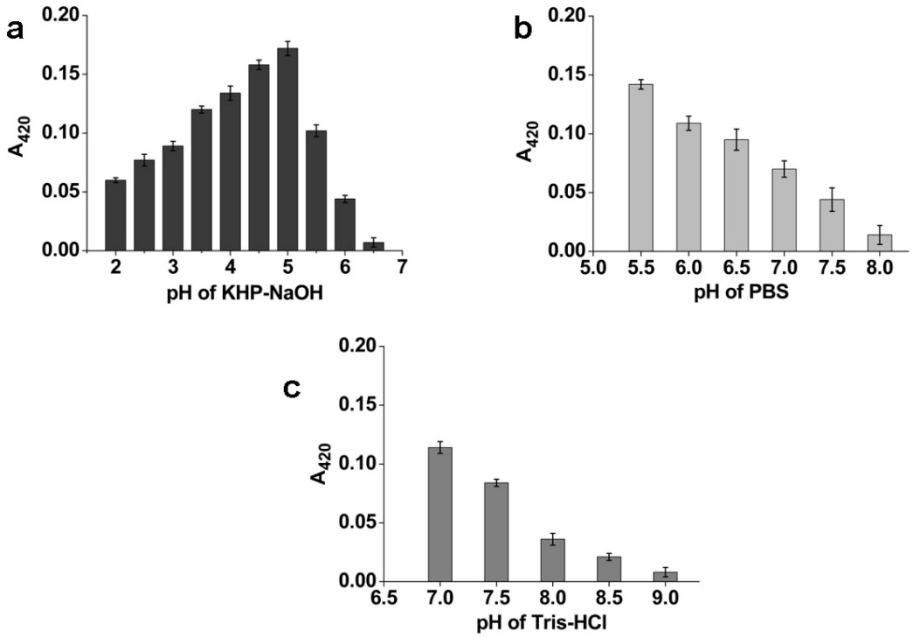

Fig. S3 Effect of pH value in different buffer solutions for guaiacol polymerization: (a) KHP-NaOH buffer solutions with pH from 2 to 6.5, (b) PBS buffer solutions with pH

from 5.5 to 8.0 and (c) Tris-HCl buffer solutions with pH from 7.0 to 9.0.

Table S1 The composition of 402 broth.

Composition	Elements	Amounts (g L^{-1})
Basal medium	$CaCl_2 \cdot 2H_2O$	0.25
	$MgSO_4 \cdot 7H_2O$	0.50
	$(NH_4)_2SO_2$	0.20
	KH_2PO_4	3.00
	yeast extract	2.00
	glucose	5.00
Trace element solution	$ZnSO_4 \cdot 7H_2O$	0.10
	$MnCl_2 \cdot 4H_2O$	0.03
	H_3BO_3	0.30
	$CoCl_2 \cdot 6H_2O$	0.20
	$CuCl_2 \cdot 2H_2O$	0.01
	$NiCl_2 \cdot 6H_2O$	0.02
	$Na_2MoO_4 \cdot 2H_2O$	0.03
Agar power	Agar[a]	15-20

[a]The agar power is needed to prepare 402 solid medium.