Electronic Supplementary Material (ESI) for Analytical Methods.

Label-free Aptamer-Based Colorimetric Biosensor for Rapid Gliadin Detection in Foods: A Focus on Pasta, Bread, and Cookies

Figure captions

Fig. S1. UV–vis absorption spectra of AuNPs for optimizing the detection range of gluten-free samples. UV–vis absorption spectra of AuNPs at different dilutions of (a) gluten-free pasta, (b) gluten-free bread, and (c) gluten-free pasta.

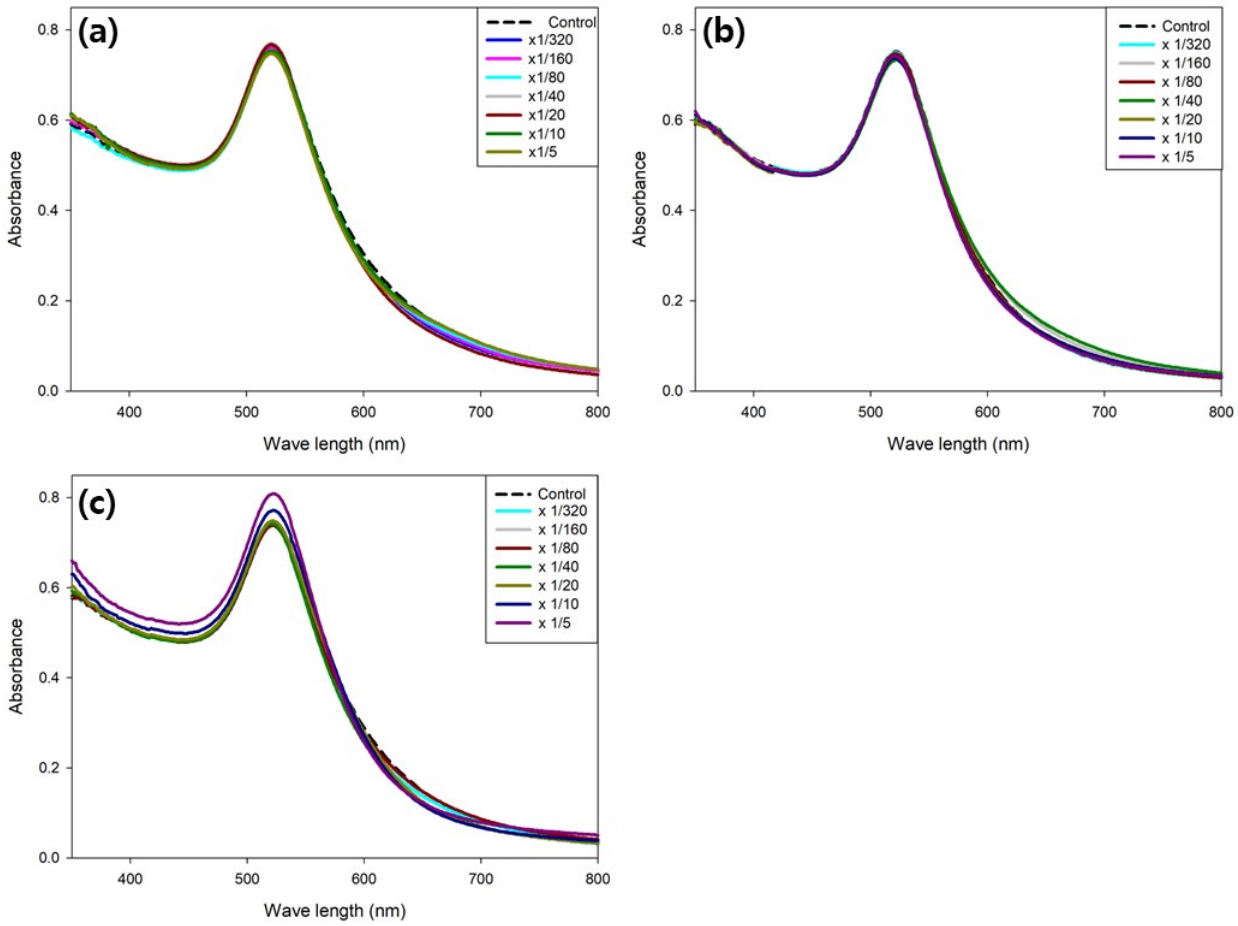
(a)
Control
x1/320
x1/160
x1/80
x1/40
x1/20
x1/10
x1/5
Absorbance
Wave length (nm)
(b)
Control
x 1/320
x 1/160
x 1/80
x 1/40
x 1/20
x 1/10
x 1/5
Absorbance
Wave length (nm)
(c)
Control
x 1/320
x 1/160
x 1/80
x 1/40
x 1/20
x 1/10
x 1/5
Absorbance
Wave length (nm)

Fig S1.

Detection of gliadin using ELISA kit

An ELISA kit was used to evaluate the efficacy of the proposed aptasensor. The protocol for the ELISA kit used in this study was as follows:

1. Standard solution (100 μL, 0 to 80 ng/mL) and 100 μL of the sample were added to 96 wells and incubated at 25℃ for 30 min.
2. The liquid from the 96 wells was removed completely. Then, the wells were washed thrice with 250 μL of washing buffer.
3. After adding 100 μL of the conjugate solution to the 96 wells, the mixture was incubated at room temperature for 30 min.
4. The liquid from the 96 wells was removed completely. Then, the wells were washed thrice with 250 μL of washing buffer.
5. After adding 50 μL of substrate and 50 μL of chromogen to the 96 wells, the mixture was incubated at room temperature for 30 min in the dark.
6. Finally, 100 μL of stop solution was added to the 96 wells, and the absorbance was measured at 450 nm.