Electronic Supplementary Material (ESI) for Analytical Methods.

Electronic Supplementary Information

One label-based fluorescence detection of a protease that breaks the peptide bond between two specific amino acids

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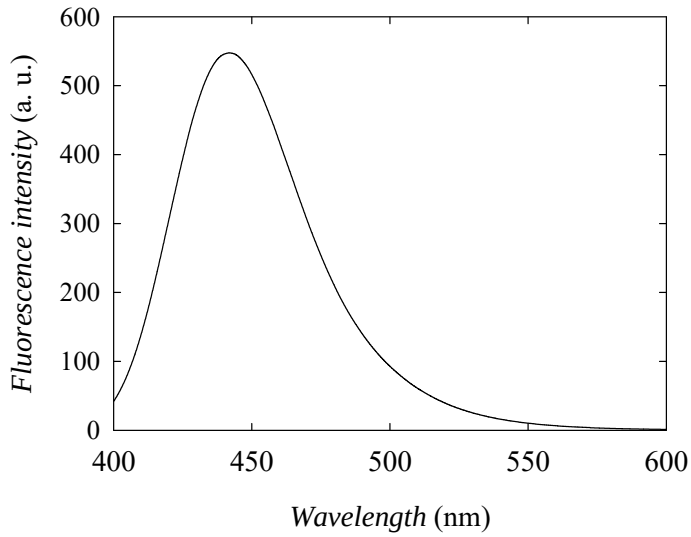

Fig. S1 Fluorescence emission spectra obtained at 37 °C in PBS containing 0.1 mM AMC.

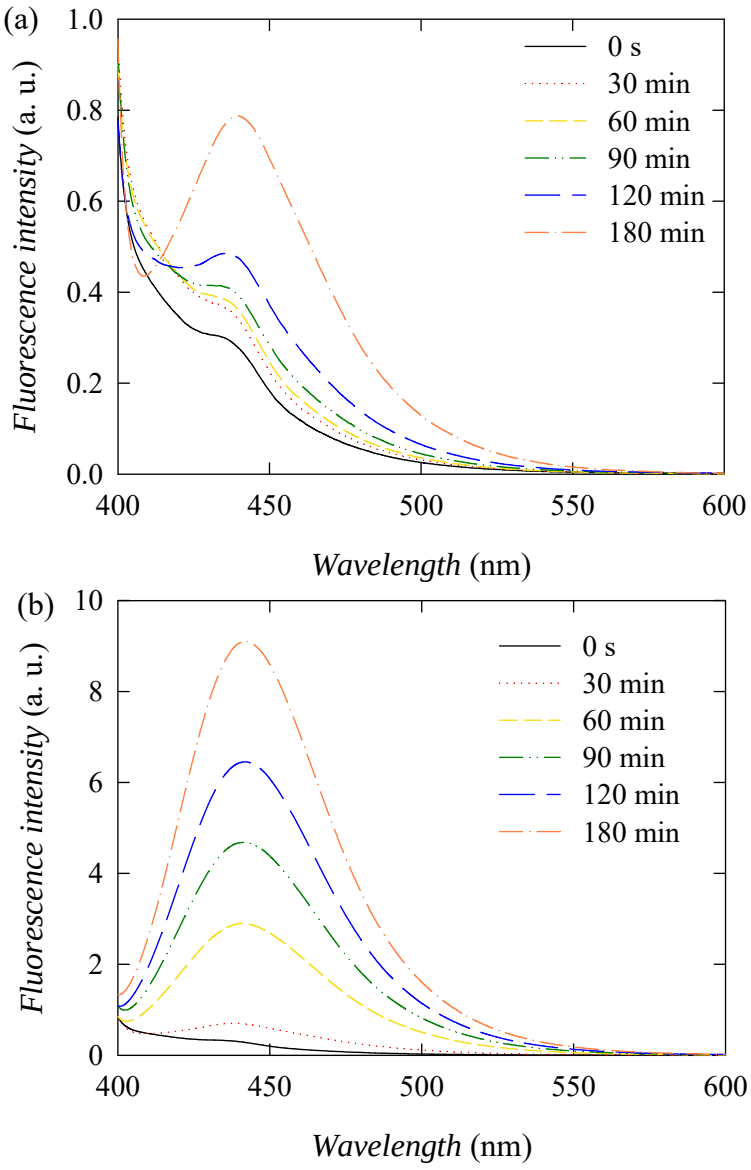

Fig. S2 Fluorescence emission spectra obtained at 37 °C in PBS containing 0.1 mM Oligo-AMC, 0.3 μg/mL LAP, and (a) 100 pg/mL BoNT-E/LC and (b) 10 ng/mL BoNT/E-LC.

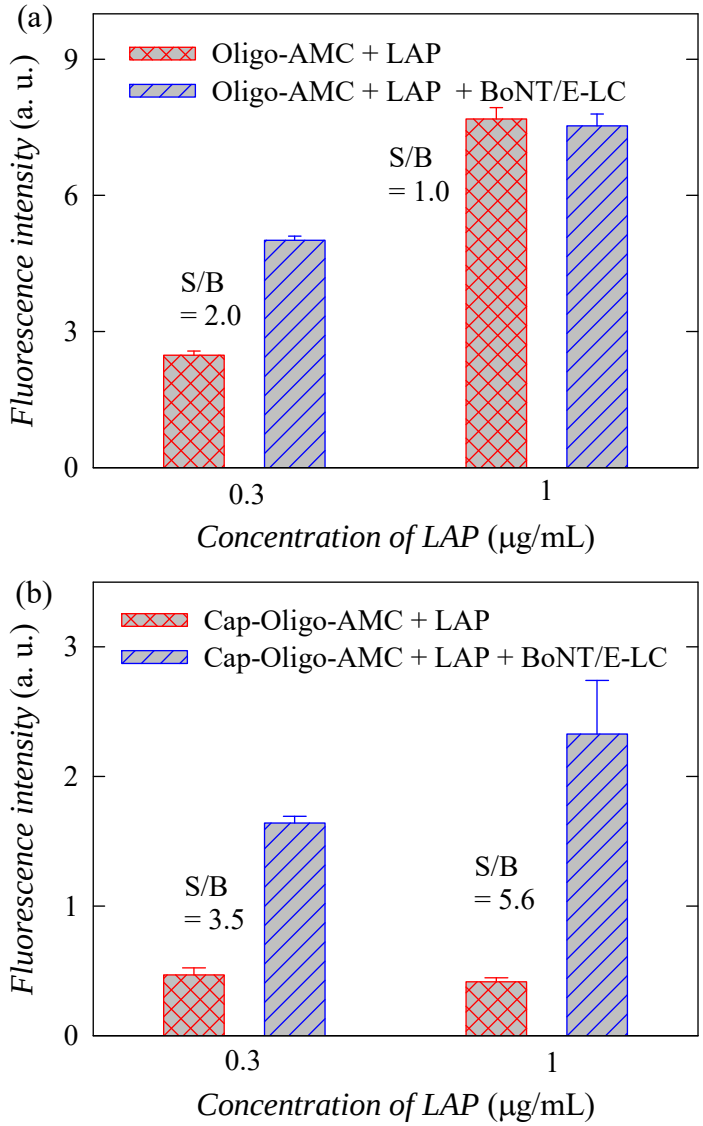

Fig. S3 Histograms for the fluorescence intensity obtained at 1 h from Fig. 3.

Signal type	Endopeptidase target	Detection limit	Detection range	Preparation and analysis time	Ref.
FRET using fluorophore/graphene oxide	BoNT/A-LC	1 fg/mL	1 fg/mL−1 pg/mL	> 3 h	[1]
FRET using fluorophore/repressor	BoNT/A	60 pg/mL	0.06−6.0 ng/mL	> 3 h	[2]
FRET using QD/dye	MMP-7	10 ng/mL	10 ng/mL −100 μg/mL	> 4 h	[3]
FRET using QD/graphene oxide	Thrombin	2 nM	2 nM−100 nM	> 1.5 h	[4]
Fluorescence	BoNT/E-LC	2 ng/mL	2 ng/mL−1 μg/mL	> 1 h	This study

Table S1 Comparison of detection results of the present one label-based fluorescence detection and two label-based fluorescence detection.

References

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[2] H. Poras, T. Ouimet, S. V. Orng, M. C. Fournie-Zaluski, M. R. Popoff, B. P. Roques, Appl. Environ. Microbiol., 2009, 75, 4328–4390.
[3] Y.-P. Kim, Y.-H. Oh, E. Oh, H.-S. Kim, Biochip Journal, 2007, 1, 228–233.
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