Electronic Supplementary Material (ESI) for Analyst


# Electronic Supplementary Information for:

# A spectroscopic off-on probe for simple and sensitive detection of carboxylesterase activity and its application to cell imaging

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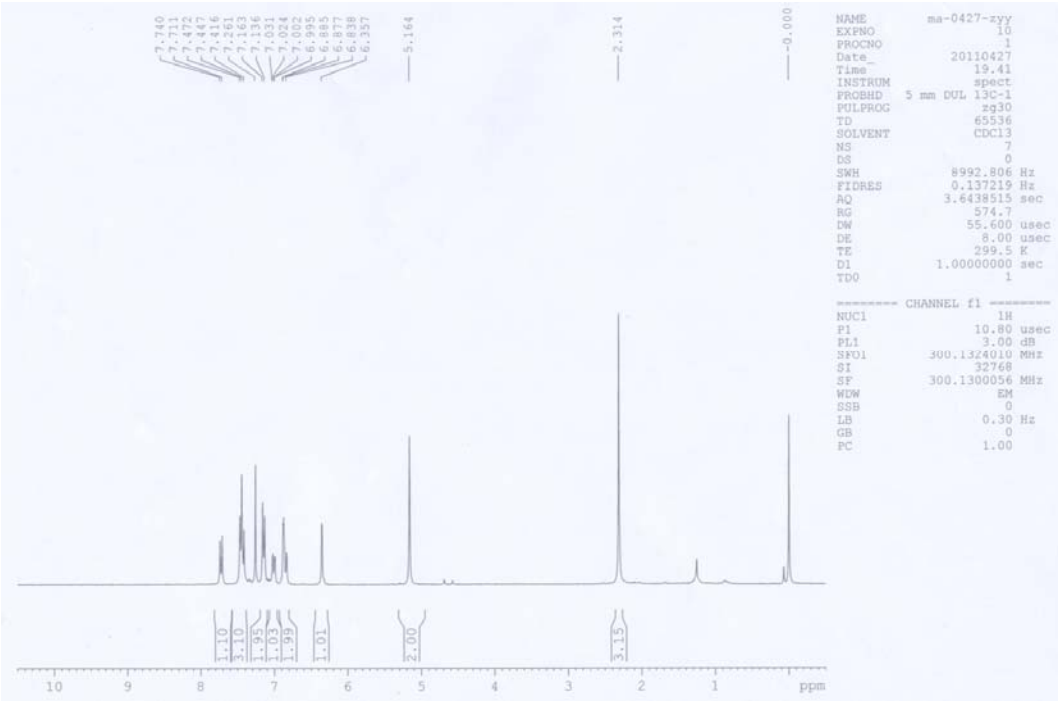


**Fig. S1** $^{1}$H NMR spectrum of **1**.

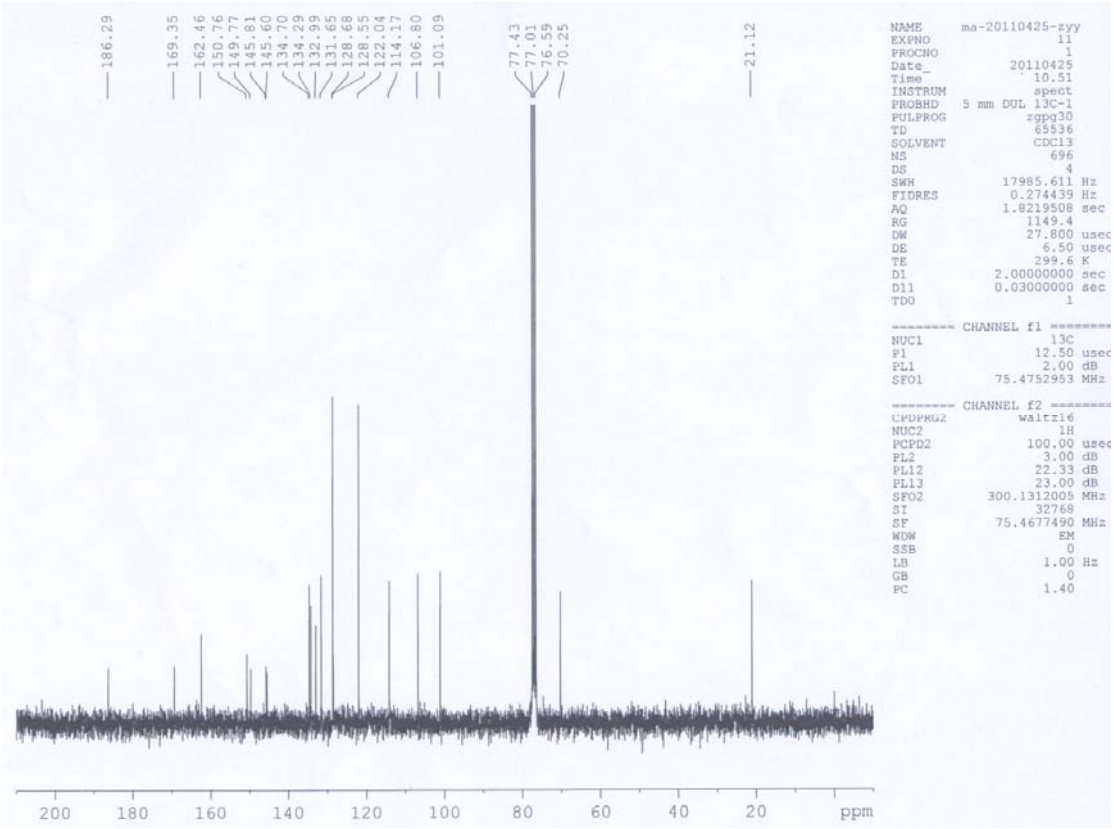


**Fig. S2** $^{13}$C NMR spectrum of **1**.

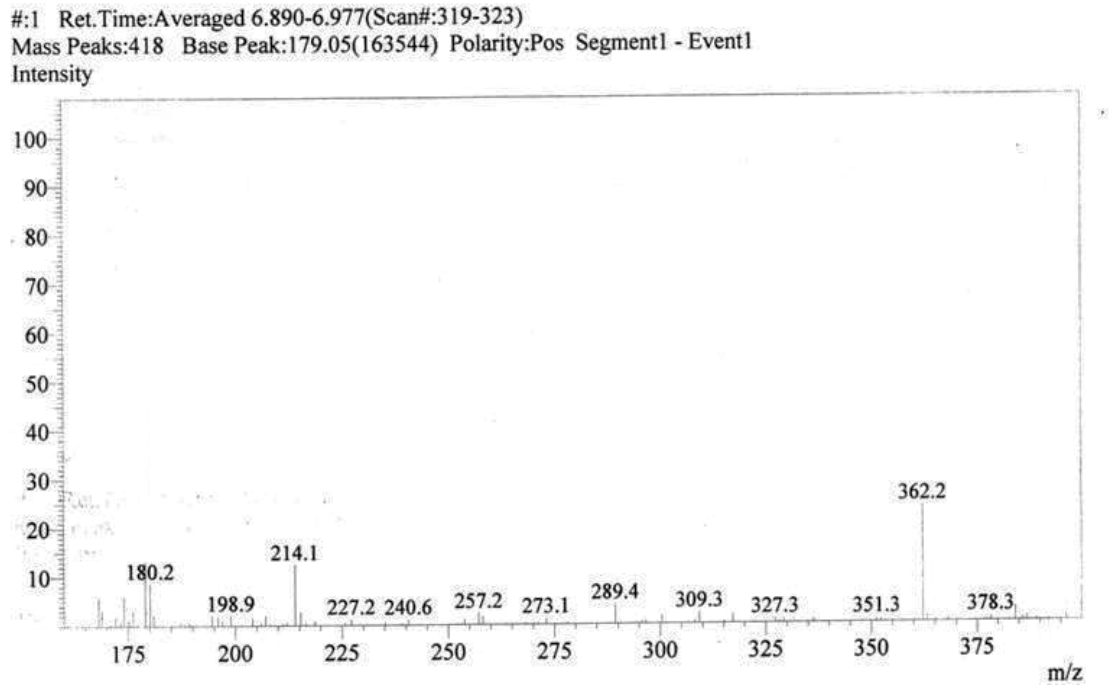


**Fig. S3** ESI mass spectrum of the reaction solution of **1** with carboxylesterase. The peaks at *m/z* = 214.1 and *m/z* = 362.2 are characterized to be resorufin ($[M+H]^+$) and the unreacted **1** ($[M+H]^+$), respectively.

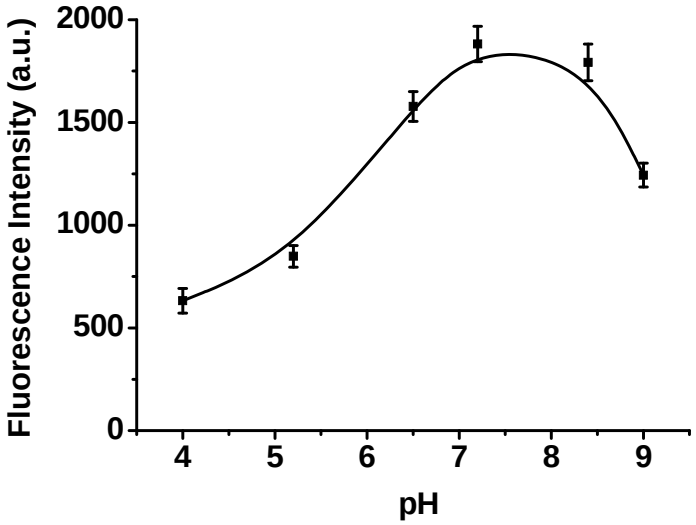


**Fig. S4** Effects of pH on the fluorescence ($\lambda_{ex/em}$ = 550/585 nm) of **1** (10 μM) reacting with carboxylesterase (0.20 U/mL). The reaction was performed in $Na_2HPO_4$-$NaH_2PO_4$ solution with different pH values adjusted by HCl and NaOH.

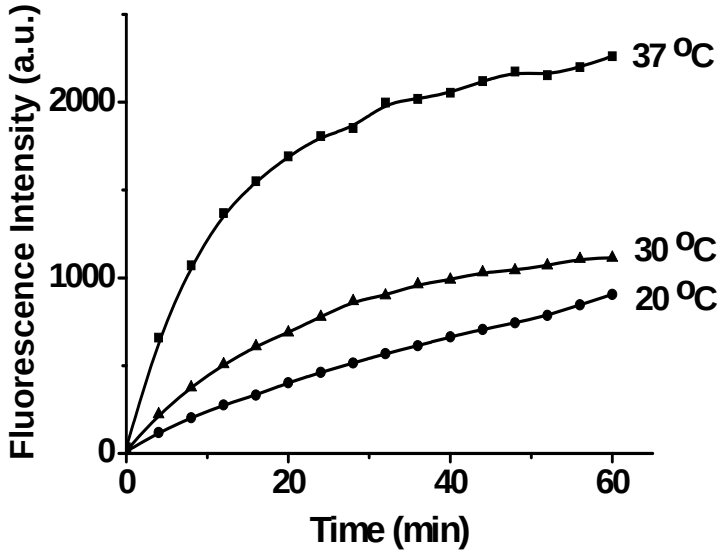


**Fig. S5** The change of fluorescence intensity ($\lambda_{ex/em}$ = 550/585 nm) of **1** (10 μM) reacting with carboxylesterase (0.20 U/mL) as a function of incubating time at different temperatures (20, 30 and 37 °C).