

Supporting Information

A Selective Glutathione Probe based on AIE Fluorogen and its Application in Enzymatic Activity Assay

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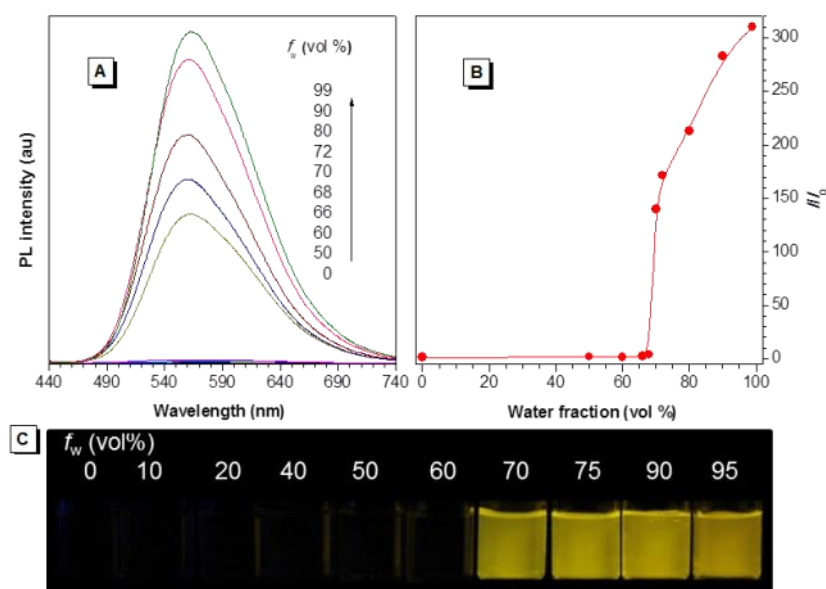
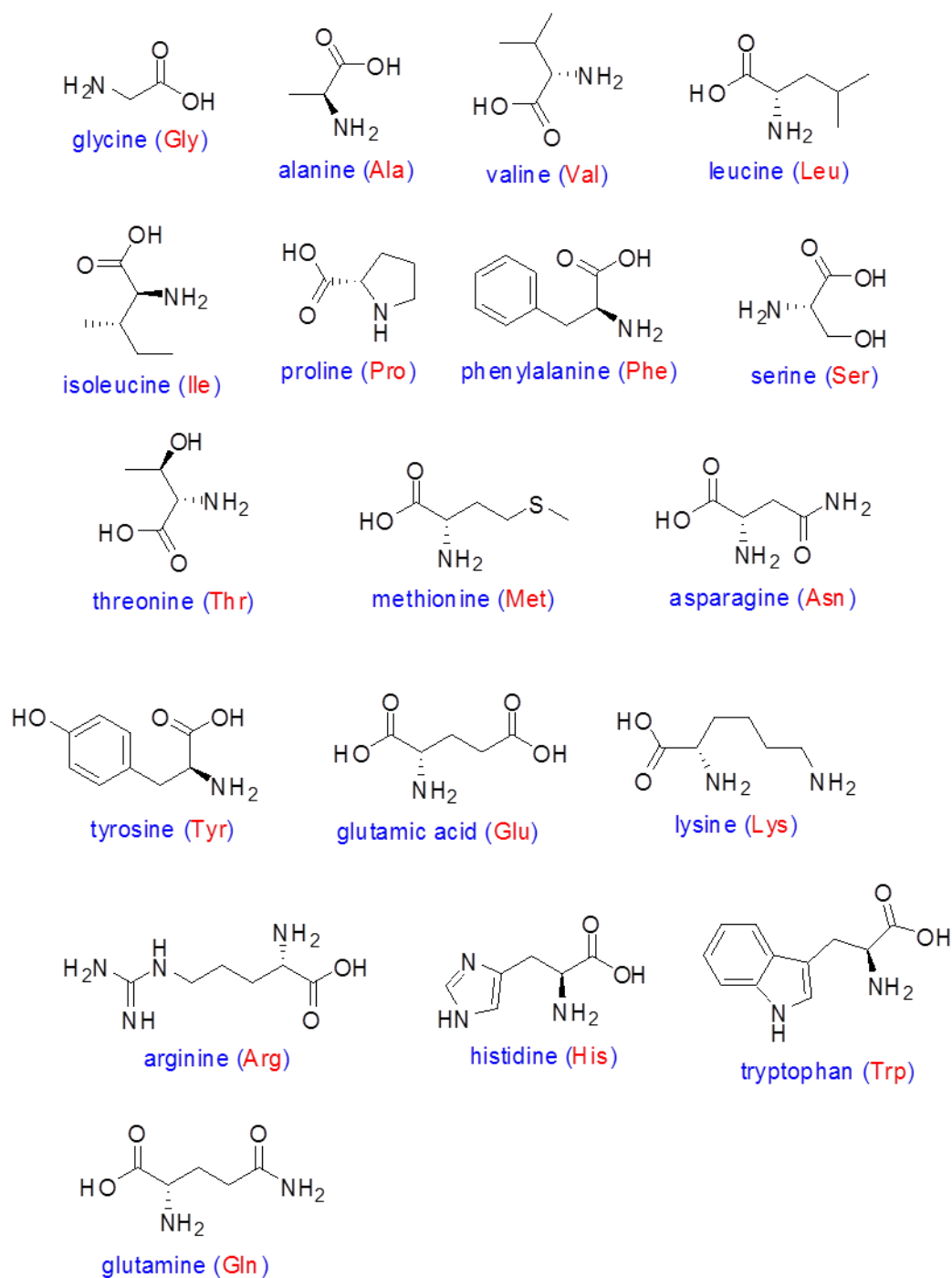


Figure S1. (A) Emission spectra of TPE-DCV (3 μ M) in ethanol/water mixtures with different volume fractions of water (f_w). (B) Plot of relative emission intensity (I/I_0) at 563 nm versus f_w . I_0 denotes the intensity of TPE-DCV in pure ethanol. Excitation wavelength: 415 nm. (C) Photographs of TPE-DCV (10 μ M) in ethanol/water mixtures with different water fractions taken under illumination of UV lamp.

Figure S2. Structures of General Amino Acids.



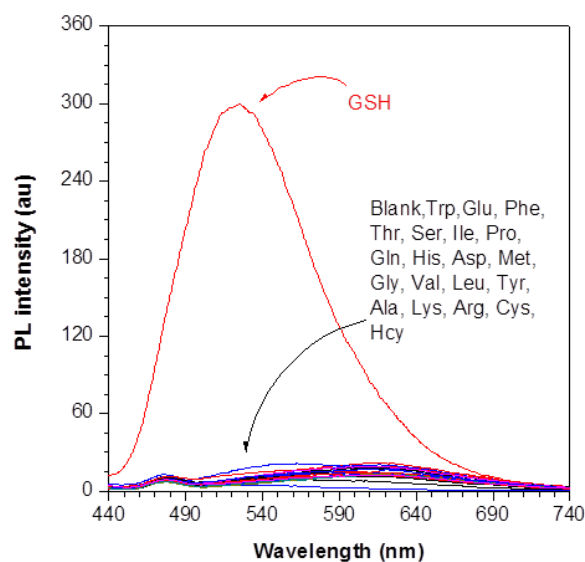


Figure S3. Emission spectra of TPE-DCV (3 μ M) in the presence of different amino acids (1 mM) in ethanol/water mixture with water fraction of 68%. Excitation wavelength: 415 nm.

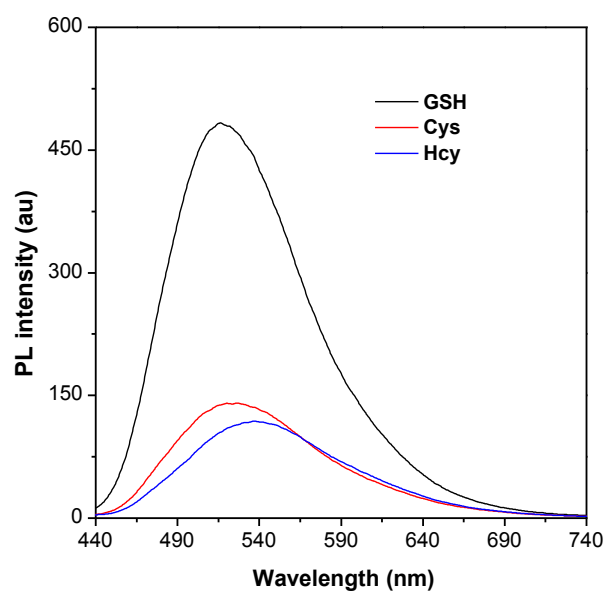


Figure S4 Emission spectra of TPE-DCV (3 μ M) in the presence of GSH, Cys and Hcy (1 mM) in ethanol/water mixture with water fraction of 70%. Excitation wavelength: 415 nm.

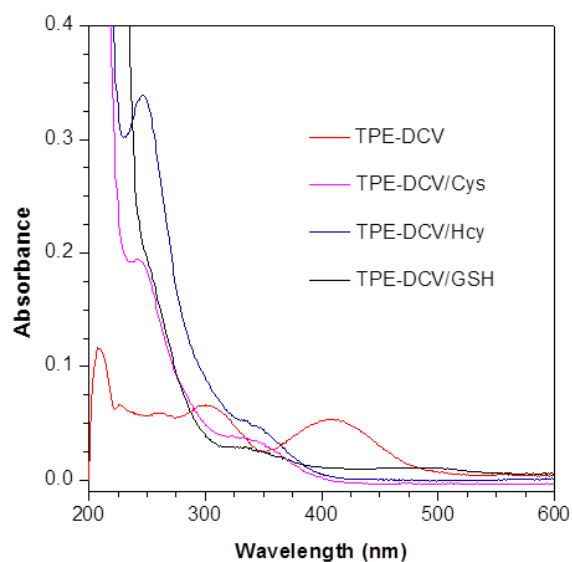


Figure S5. Absorption spectra of TPE-DCV (3 μ M) before and after addition of GSH, Cys, or Hcy (1 mM) in a water/ethanol mixture (68:32, v/v).

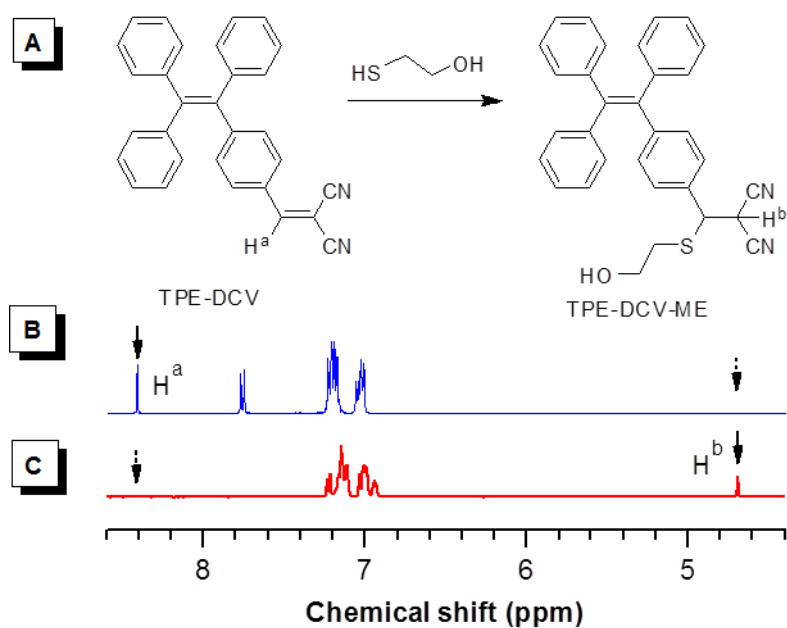


Figure S6. (A) Model reaction of TPE-DCV with 2-mercaptoethanol (ME). ^1H NMR spectra of (B) TPE-DCV (10 mM) and (C) its reaction product in the presence of 8 molar equivalent ME at room temperature in $\text{DMSO-}d_6$.

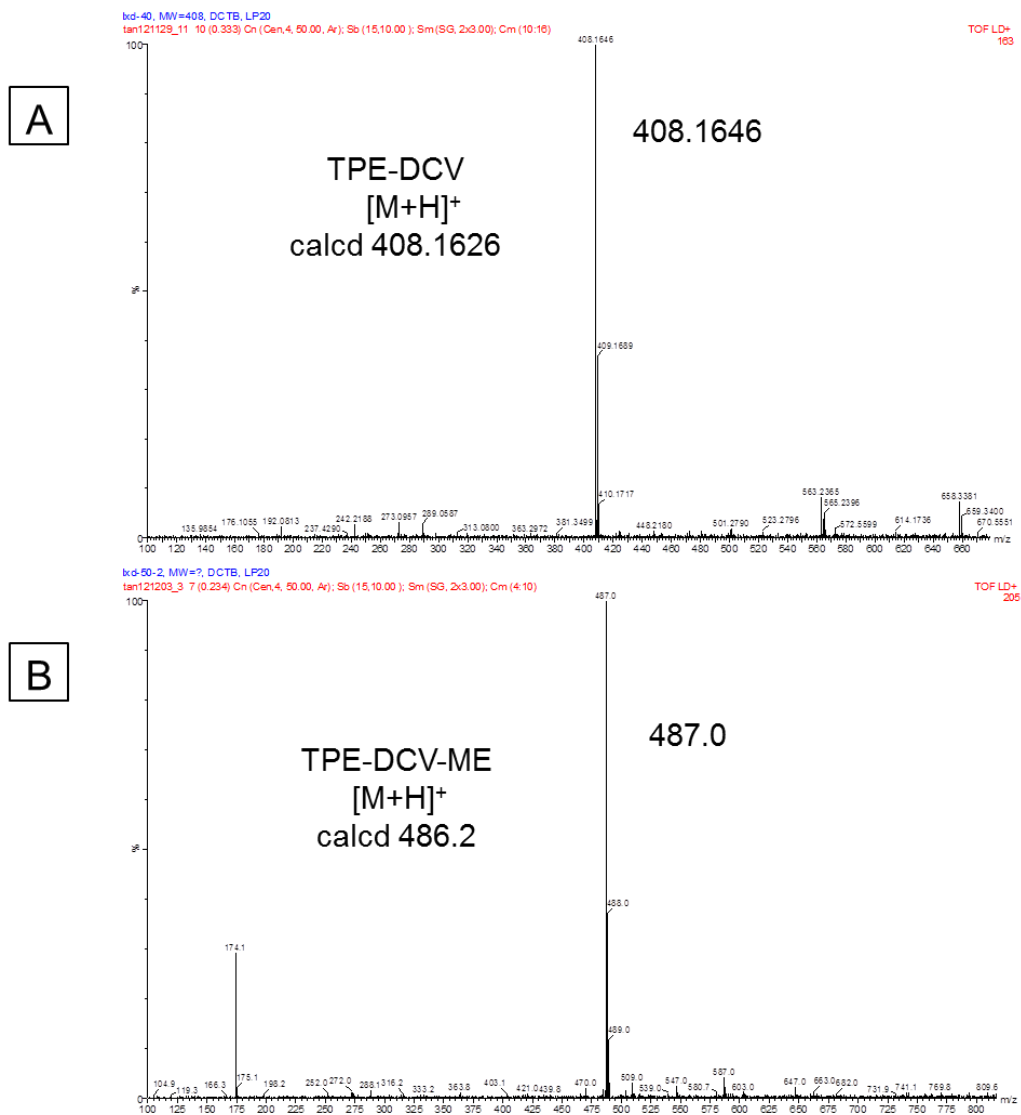


Figure S7. Mass spectra of (A) TPE-DCV and (B) TPE-DCV-ME.

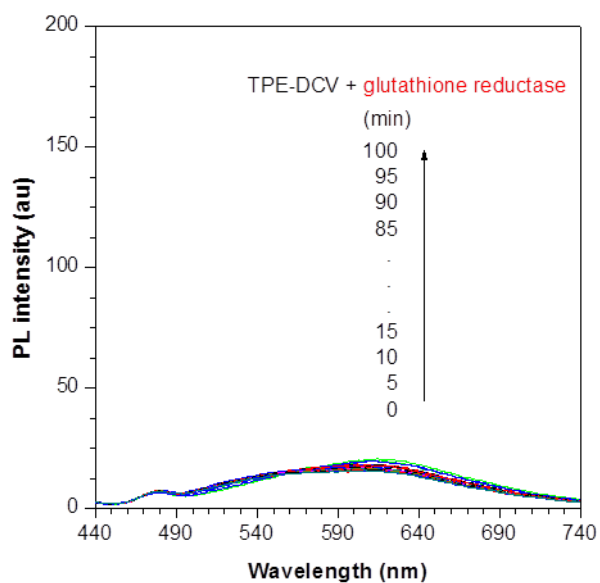


Figure S8. Time-dependent emission spectra of TPE-DCV (3 μM) in the presence of glutathione reductase (10 UN) in a water/ethanol mixture (68:32, v/v). Excitation wavelength: 415 nm.

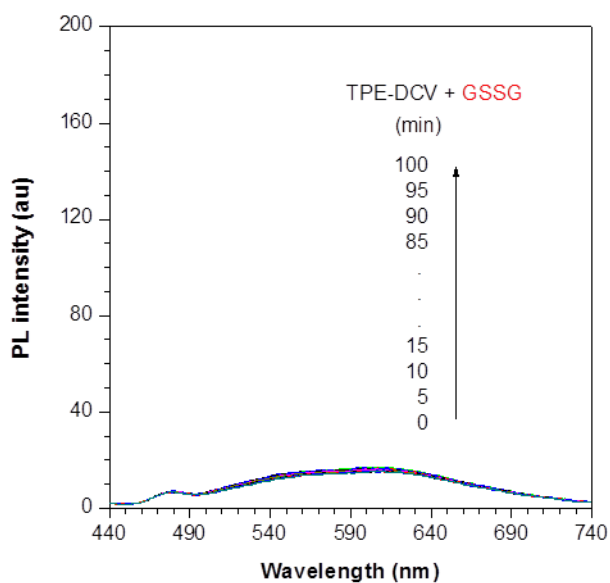


Figure S9. Time-dependent emission spectra of TPE-DCV (3 μM) in the presence of GSSG (1 mM) in a water/ethanol mixture (68:32, v/v). Excitation wavelength: 415 nm.

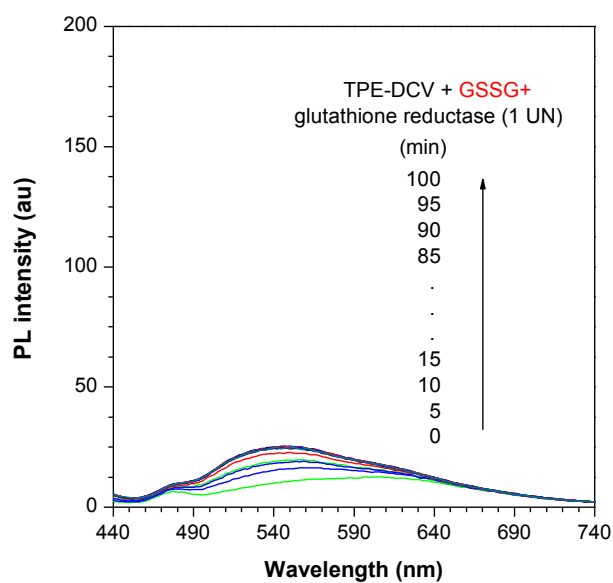


Figure S10. Time-dependent emission spectra of TPE-DCV (3 μ M) in a water/ethanol mixture (68:32, v/v) with GSSG (1 mM) in the presence of glutathione reductase (1 UN). Excitation wavelength: 415 nm.

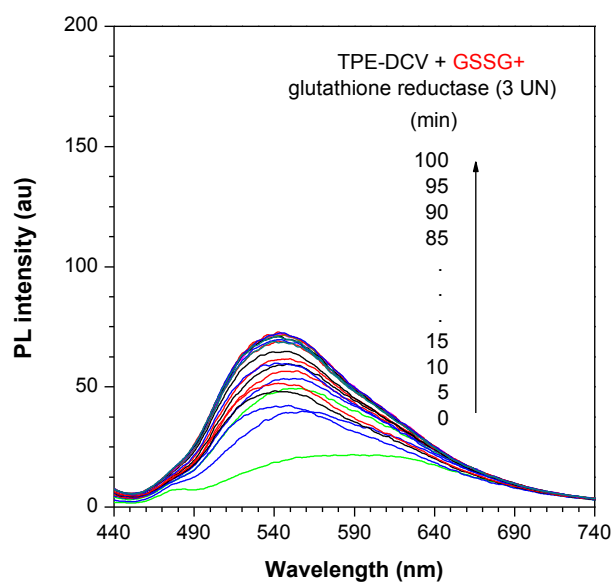


Figure S11. Time-dependent emission spectra of TPE-DCV (3 μ M) in a water/ethanol mixture (68:32, v/v) with GSSG (1 mM) in the presence of glutathione reductase (3 UN). Excitation wavelength: 415 nm.

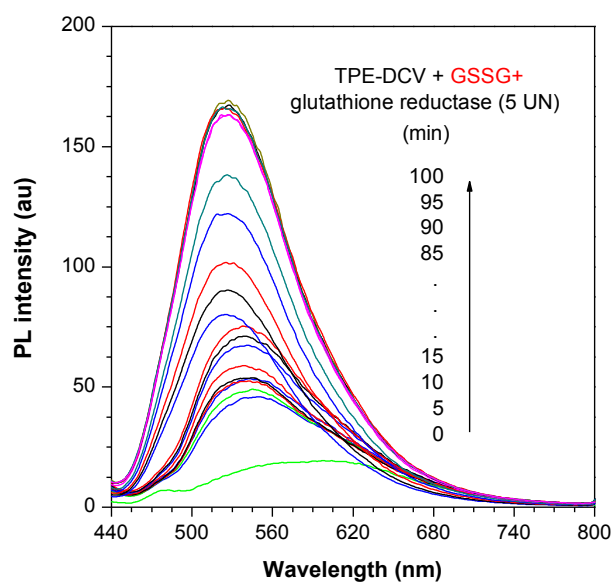


Figure S12. Time-dependent emission spectra of TPE-DCV (3 μM) in a water/ethanol mixture (68:32, v/v) with GSSG (1 mM) in the presence of glutathione reductase (5 UN). Excitation wavelength: 415 nm.

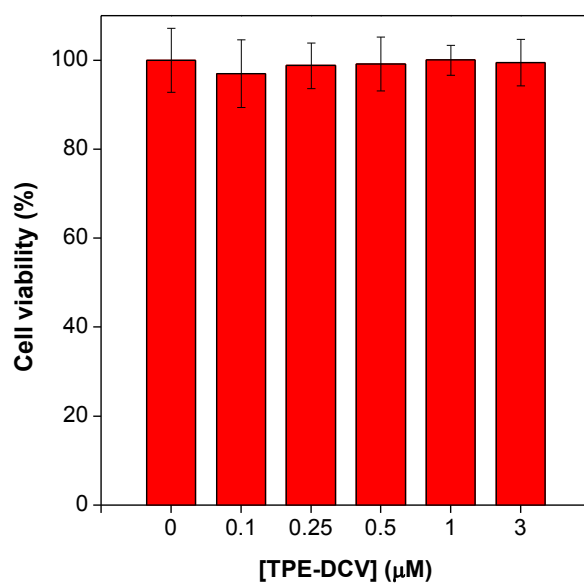


Figure S13. Cytotoxicity of TPE-DCV on HeLa cells evaluated by MTT assay.