

Effects of TRFS-green concentration on the reduction of TRFS-green by *E. coli* Trx system

Various concentration of TRFS-green probe was added in the solution containing 200 μM NADPH, 50 nM *E. coli* TrxR, 1 μM *E. coli* Trx in TE buffer (50 mM Tris-HCl, 1 mM EDTA, pH 7.5). The fluorescent intensity of the solution were measured every 30 minutes for 2 h using the VERSA microplate reader at 37 °C, with the excitation at 438 nm and the emission at 538 nm.

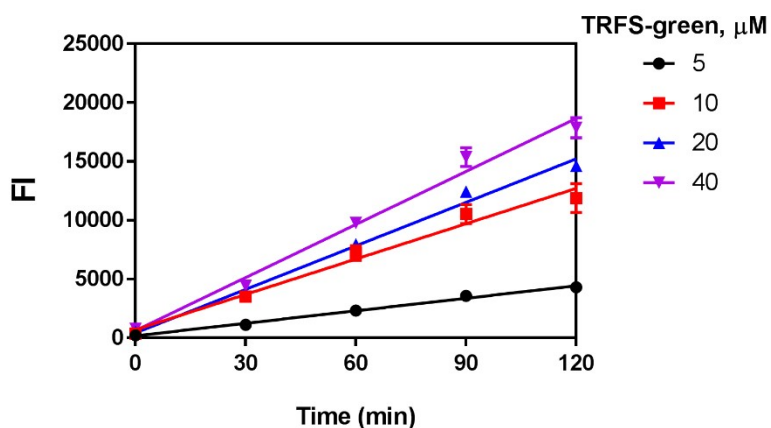


Fig. S1 Effects of TRFS-green concentration on the reduction of TRFS-green by *E. coli* Trx system. Data were obtained from three independent experiments and shown as mean \pm SD.

Comparison of the reduction of TRFS-green by *E. coli* Trx system with some small reductants

TRFS-Green (10 μ M) were mixed with 1 mM NaHS (), 1 mM vitamin C, 100 nm *E. coli* TrxR / 1 μ M Trx1 in the presence of 200 μ M NADPH in TE buffer, separattively. Then the fluorescence intensity of the solution was determined at 37 $^{\circ}$ C every 30 min for 2 h using the VERSA microplate reader, with the excitation at 438 nm and the emission at 538 nm.

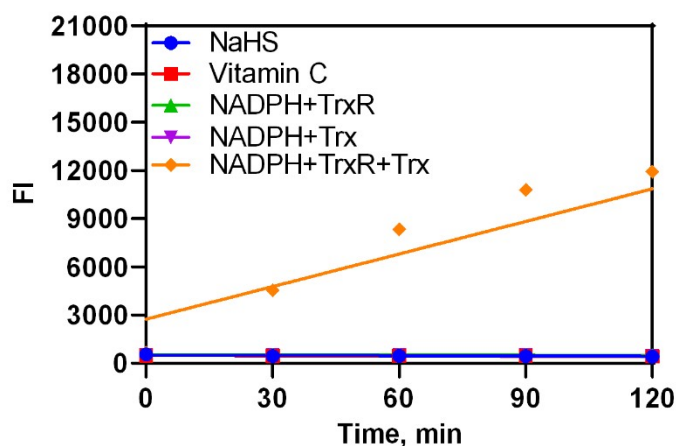


Fig. S2 Comparison of the reduction of TRFS-green by *E. coli* Trx system with some small reductants including vitamin C, NaHS. Data were obtained from three independent experiments and shown as mean \pm SD.