Internal electron transfer in multi-site redox enzymes is accessed by laser excitation of thiouredopyrene-3,6,8-trisulfonate (TUPS)

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Supplementary figures

Figure S1 Absorbance spectra of 50 μM CPR in the presence of 200 μM TUPS before laser photoexcitation and after excitation with 20 and 100 laser pulses at 355 nm. The inset shows the absorbance difference spectra, using a non-excited sample as a blank.

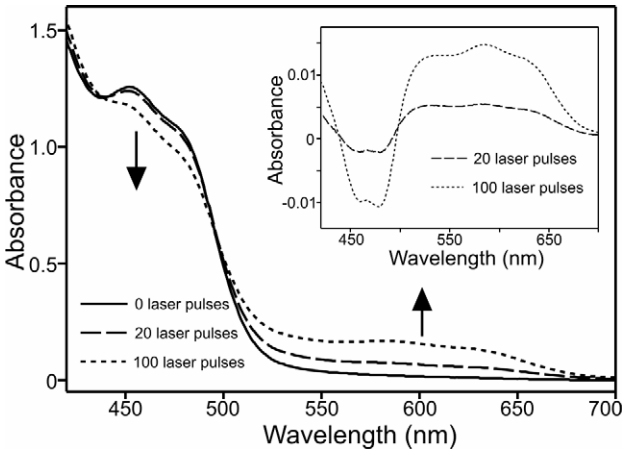

Figure S2 The rate of electron transfer from photoexcited TUPS to CPR measured at a range of TUPS concentrations. The error bars were calculated from the average of at least 5 transients.

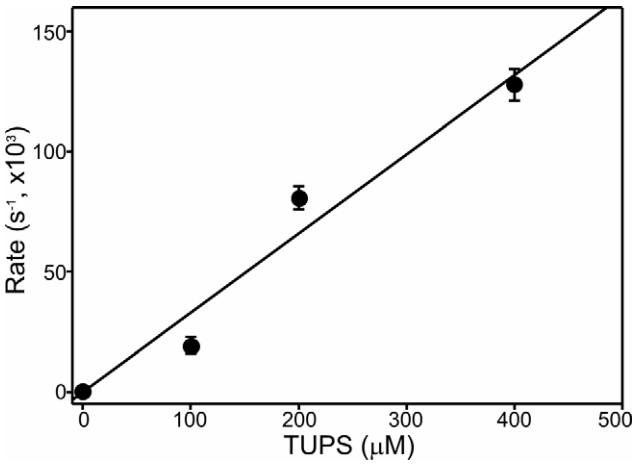

Figure S3. Dependence of slower kinetic phases on the concentration of TUPS and CPR. (**A**) The rate of the initial phase of decrease in absorbance at 630 nm measured over a range of TUPS concentrations. The error bars were calculated from the average of at least 5 transients. (**B**) The rate of the slower phase of decrease in absorbance at 630 nm measured over a range of CPR concentrations. The error bars were calculated from the average of at least 5 transients.

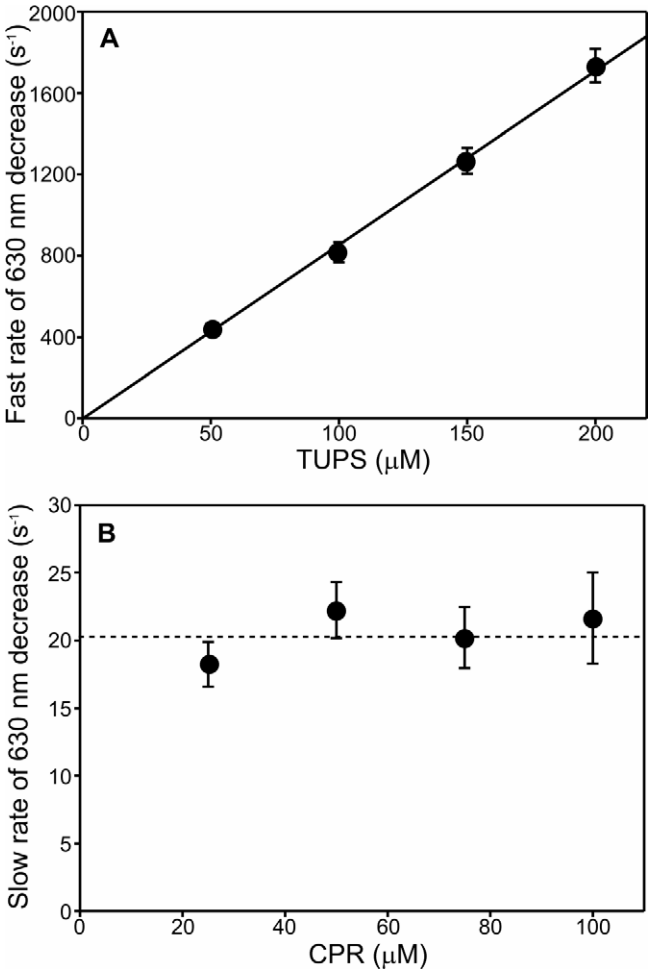

Figure S4 Absorbance spectra of TUPS-nNOS reductase sample after covalent attachment to the protein as described in the *Experimental* section. The TUPS and nNOS reductase absorption peaks are indicated.