Supporting Information

Effects of Mutating Aromatic Surface Residues of the Heme Domain of Human Sulfite Oxidase on its Heme Midpoint Potential, Intramolecular Electron Transfer, and Steady-State Kinetics

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Statistical analysis of k_{et} values

Comparison of the electron transfer rate constants (k_{et}) for the six mutants in Figure 5 measured at both pH 7.4 and 6.8, using the program Prism6©, showed a significant interaction (two-way analysis of variance, ANOVA, $p < 0.0001$ for interaction, n= 6). Additionally, both the mutation and pH significantly affect the k_{et} measured ($p < 0.0001$, n = 6). A *post hoc* Dunnett's test was performed to determine for which mutants k_{et} varied significantly compared to the wild type (wt). At pH = 7.4, the F57Y mutant was significantly different from wt ($p < 0.001$, n = 6). However, at pH = 6.8, all but the F79A mutant varied significantly compared to wt ($p < 0.001$). The graph summarizes these comparisons.