Resonance Raman Studies of Cytochrome P450 2B4 in its Interactions with Substrates and Redox

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**Figure S1.** Low frequency resonance Raman spectra of wild type ferric P450 2B4 without (spectra A and B) and with substrates (C and D with benzphetamine, BZ; E and F with butylated hydroxytoluene; BHT) at 4 and 30 °C in the presence of Mn(III) cyt $b_5$. Excitation line 406 nm, 8 mW on the sample, total collection time 15 min (spectra normalized to $v_7$ mode).
Figure S2. Low frequency resonance Raman spectra of wild type ferric P450 2B4 without (spectra A and B) and with substrates (C and D with benzphetamine, BZ; E and F with butylated hydroxytoluene; BHT) at 4 and 30 °C in the presence of P450 reductase. Excitation line 406 nm, 8 mW on the sample, total collection time 15 min (spectra normalized to $v_7$ mode).
Figure S3. High frequency resonance Raman spectra of ferrous CO adducts of P450 2B4 without (spectra A and B) and with substrates (C and D with benzphetamine, BZ; E and F with butylated hydroxytoluene; BHT) at 4 and 30 °C. Excitation line 442 nm, 1 mW on the sample, total collection time 10 min (spectra normalized to $\nu_4$ mode at 1368 cm$^{-1}$).
Figure S4. Low frequency resonance Raman spectra of ferrous CO adducts of P450 2B4 without (spectra A and B) and with substrates (C and D with benzphetamine, BZ; E and F with butylated hydroxytoluene; BHT) at 4 and 30 °C in the presence of Mn(III) cyt b₅. Excitation line 442 nm, 1 mW on the sample, total collection time 10 min (spectra normalized to v₇ mode at 673 cm⁻¹).
Figure S5. Low frequency resonance Raman spectra of ferrous CO adducts of P450 2B4 without (spectra A and B) and with substrates (C and D with benzphetamine, BZ; E and F with butylated hydroxytoluene; BHT) at 4 and 30 °C in the presence of P450 reductase. Excitation line 442 nm, 1 mW on the sample, total collection time 10 min (spectra normalized to vγ mode at 673 cm⁻¹).
**Figure S6.** High frequency resonance Raman spectra of ferrous CO adducts of cyt P450 2B4 without (spectra A and B) and with substrates (C and D with benzphetamine, BZ; E and F with butylated hydroxytoluene; BHT) at 4 and 30 °C in the presence of Mn(III) cyt b₅. Excitation line 442 nm, 1 mW on the sample, total collection time 10 min (spectra normalized to ν₄ mode at 1365 cm⁻¹).
Figure S7. High frequency resonance Raman spectra of ferrous CO adducts of P450 2B4 without (spectra A and B) and with substrates (C and D with benzphetamine, BZ; E and F with butylated hydroxytoluene; BHT) at 4 and 30 °C in the presence P450 reductase. Excitation line 442 nm, 1 mW on the sample, total collection time 10 min (spectra normalized to $v_4$ mode at 1367 cm$^{-1}$).