

Electronic Supplementary Information

The role of an amino acid triad at the entrance of the heme pocket in human serum albumin for O₂ and CO binding to iron protoporphyrin IX

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Table S1 UV-vis absorption spectral data of rHSA(mutant)–FePP complexes in 50 mM potassium phosphate buffered solution (pH 7.0) at 22°C.

Hemoproteins	λ_{\max} (nm)			
	Fe ³⁺	Fe ²⁺	Fe ²⁺ O ₂	Fe ²⁺ CO
rHSA1–Fe ²⁺ PP ^a	408, 528, 620	422, 530(sh), 558	412, 538, 570	419, 537, 560
rHSA2–Fe ²⁺ PP ^a	402, 533, 620	426, 531(sh), 559	412, 537, 573	419, 538, 565
rHSA1(H146R)–Fe ²⁺ PP	403, 534, 620	426, 531(sh), 559	411, 540, 577	422, 540, 569
rHSA1(K190R)–Fe ²⁺ PP	409, 532, 618	427, 530(sh), 559	411, 540, 575	422, 541, 568
rHSA1(H146R/K190R)–Fe ²⁺ PP	403, 533, 620	427, 530(sh), 559	411, 541, 577	422, 541, 569
rHSA2(H146R/K190R)–Fe ²⁺ PP	402, 533, 620	428, 531(sh), 559	409, 537, 575	420, 539, 568
rHSA2–Fe ²⁺ DMDP	394, 515, 611	415, 521(sh), 549	403, 528, 562 ^b	410, 530, 557
Mb ^{a,c}	409, 503, 548(sh), 632	434, 557	418, 544, 581	423, 541, 579

^aFrom ref 9b. ^bAt 5°C. ^cHorse muscle Mb (Sigma).

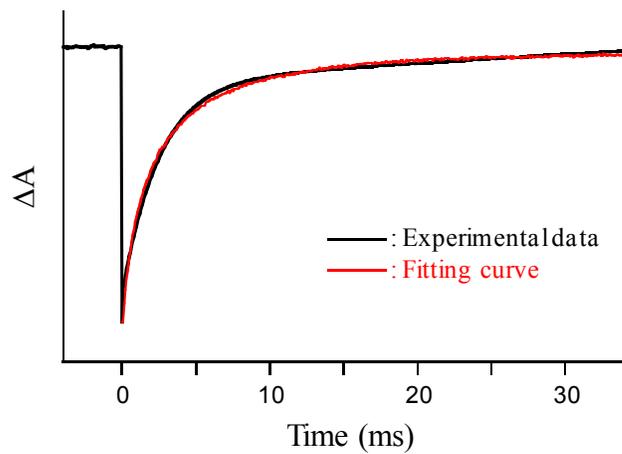


Fig. S1 Absorption decay of CO rebinding to rHSA2-Fe²⁺DMDP after the laser flash photolysis at 22°C. The kinetics was composed of monophasic phase. A relaxation curve was fitted single exponential (red line).