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Supplementary materials

Pathway Crosstalk between the Central Metabolic and Heme Biosynthetic Pathways in *Phanerochaete chrysosporium*

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Running Title: Metabolic pathway crosstalk in *P. chrysosporium.*

Keywords: Basidiomycete, heme, heme-binding protein, pathway crosstalk

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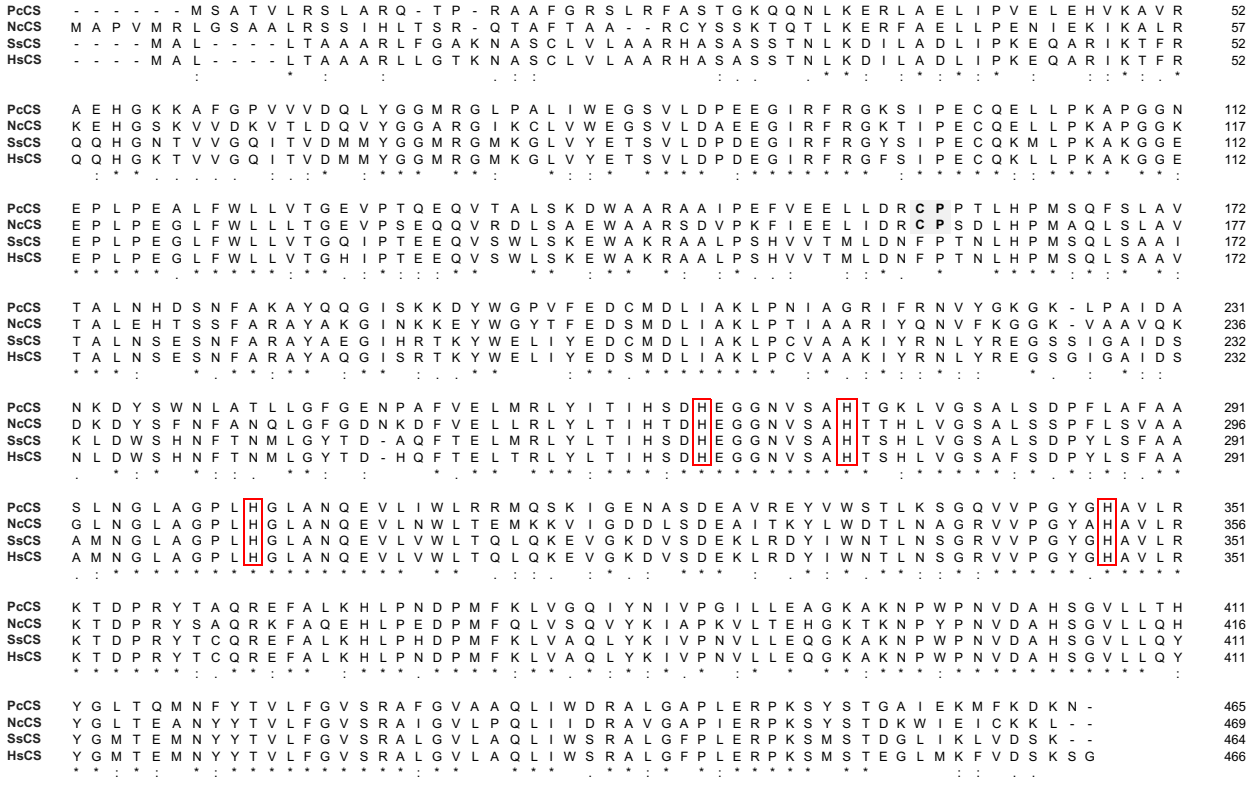

Figure S1 Amino acid sequence alignment of CS isozymes and PcCS. Sequences of PcCS from *P. chrysosporium* (Protein ID; 6342608), NcCS from *Neurospora crassa* (Protein ID; P34085), SsCS from *Sus scrofa domesticus* (Protein ID; A0A0B8S099), and HsCS from *Homo sapiens* (Protein ID; O75390) are shown. The protein IDs of *Neurospora crassa*, *Sus scrofa domesticus*, and *Homo sapiens* were obtained from UniProt Knowledgebase (http://beta.uniprot.org) and the ID of *P. chrysosporium* was obtained from JGI Genome Portal (http://genome.jgi.doe.gov). The four His residues on the protein surface at the active site is boxed in red. Heme-responsive-motifs (HRM) conserved in fungal CS are bold and shaded in gray. The sequences were aligned using Clustal Omega program (http://www.clustal.org/omega/).

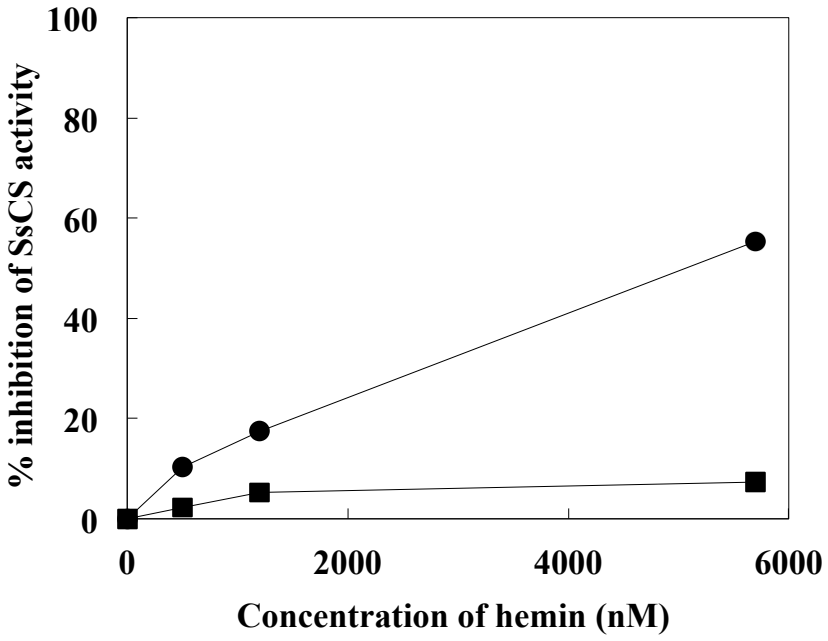

Figure S2 Inhibitory effect of hemin on SsCS reaction. Reaction mixtures containing 1.5 nM SsCS, 40 mM Tris/HCl (pH 8.5) and 0, 0.5, 1.2 and 5.7 μM hemin were incubated for 0 (■) or 60 min (●) at 4°C, then 0.2 mM OAA, 0.2 mM AcCoA, and DTNB were added.