

**SUPPLEMENTARY FIG. S1.** Effect of the metal chelator, DTPA ( $50 \mu M$ ), on the kinetics of aerobic H<sub>2</sub>S degradation by liver homogenate in 100 mM HEPES, pH 7.4 (A) or 100 mM sodium phosphate, pH 5.8 (B). Representative data from three independent experiments are shown in (A) and (B).



**SUPPLEMENTARY FIG. S2.** Kinetics of aerobic  $H_2S$  degradation in homogenates prepared from fresh (*open symbols*) and frozen (*black symbols*) mouse liver in 100 mM HEPES buffer, pH 7.4. (A) The kinetics of  $H_2S$  clearance were measured immediately following homogenate preparation, and the data represent the mean ± SD for three independent experiments and the lines are exponential fits. (B) Time-dependent changes in the kinetics of  $H_2S$  clearance by homogenates prepared from fresh liver incubated for 0, 30, and 60 min on ice. Kinetics of  $H_2S$  degradation by homogenate prepared from frozen liver analyzed immediately after preparation is included for comparison. Representative data from three independent experiments are shown.