

Supplementary Information

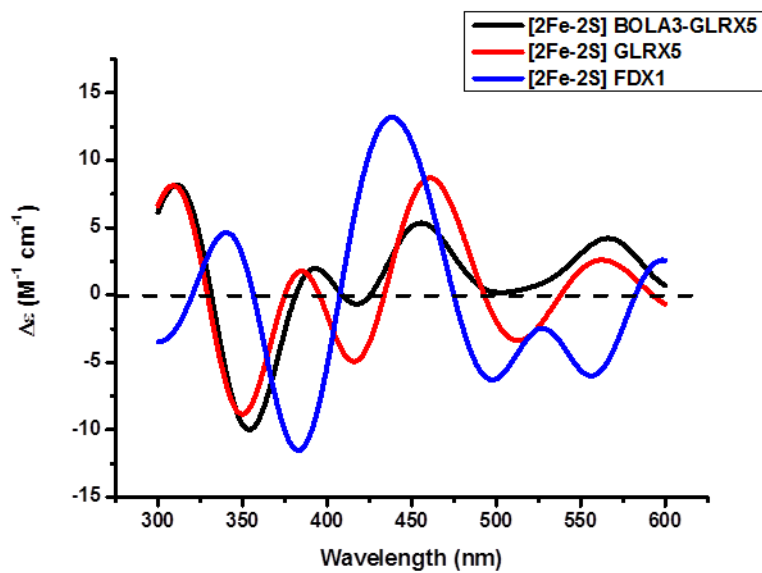


Figure S1. Representative CD spectra of the different [2Fe-2S] bound species involved in the cluster transfer reactions.

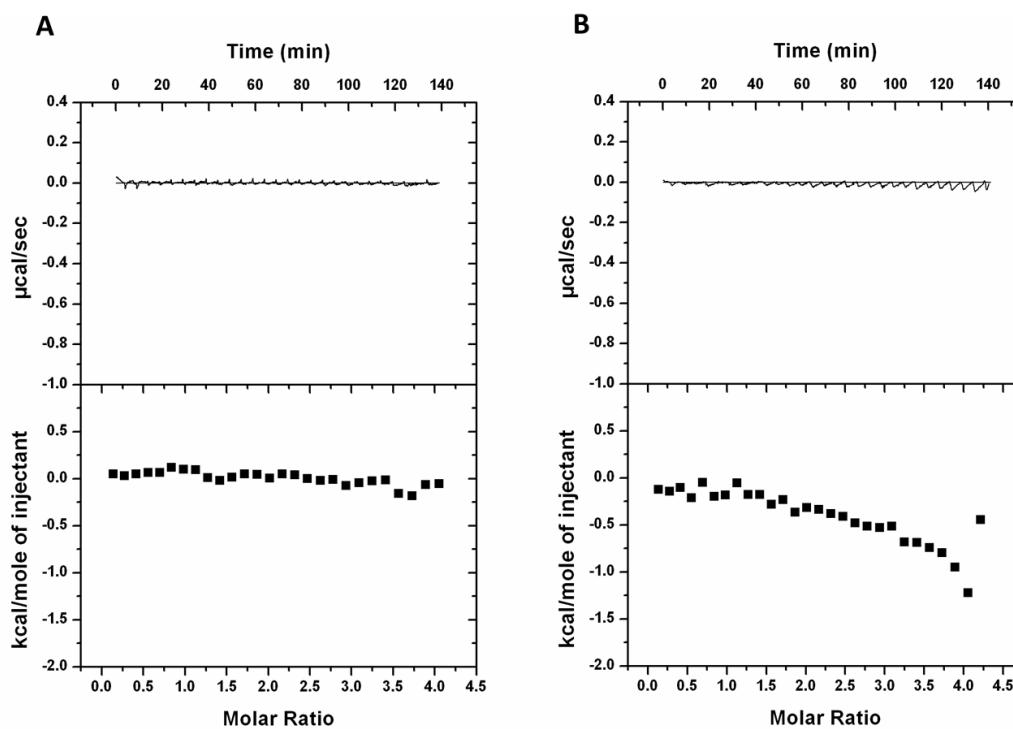


Figure S2. Isothermal titration calorimetry plots for (A) Apo Ile67Ala BOLA3 titrated to apo GLRX5 and (B) Apo Ile67Arg BOLA3 titrated to apo GLRX5 that show no meaningful binding. The experiments were performed in the presence of 5 mM GSH in 50 mM HEPES, 100 mM NaCl, pH 7.5. 1 mM BOLA3 was titrated into 50 μM GLRX5 in 10 μL aliquots over a period of 24 s with a 5 min interval at 30 $^{\circ}\text{C}$.