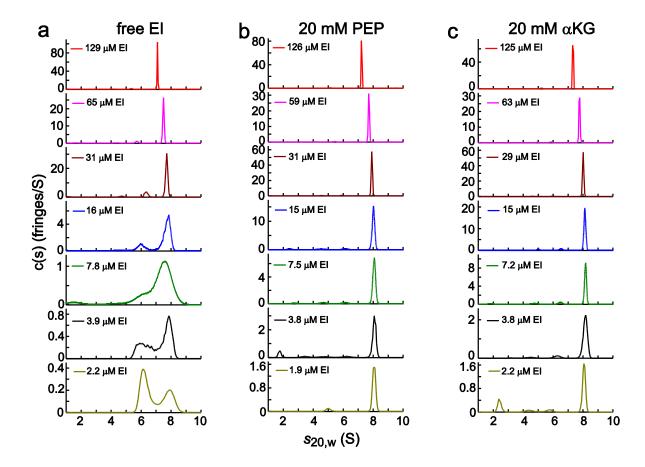
## **SUPPORTING INFORMATION**

## Structural basis for enzyme I inhibition by $\alpha$ -ketoglutarate

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Figure S1. The c(s) distributions for EI obtained at different loading concentrations (ranging from ~130 to ~2  $\mu$ M) based on sedimentation velocity interference data collected at 50 krpm and 20.0°C. Data acquired for the free EI (a) revealed concentration dependent c(s) interference profiles typical of a monomer-dimer equilibrium. In the presence of 20 mM PEP (b) and 20 mM  $\alpha$ KG (c) the sedimentation experiments indicate that EI is mainly dimeric and only traces of monomeric enzyme are detected.



**Figure S2.** 600 MHz  $^1\text{H-}^{15}\text{N}$  TROSY spectra of EIC acquired in the presence of 0, 1, 2 and 4 mM  $\alpha$ KG.

