Supplementary Fig. 1:  

**Top** Electron density maps for the product molecule in chain C of data set 2 (inhibitor cocrystallisation; $2F_o-F_c$ in blue contoured at 1σ, negative $F_o - F_c$ in red contoured at -3σ, positive $F_o - F_c$ in green contoured at 3σ within 1.6 Å), second representation is rotated 90°. **Bottom** Chemical structure of the catalytic product 6,7-dimethyl-8-(D-ribityl)lumazine and the commercially available, weak binding inhibitor ($K_i = 210 \mu M$ vs $S. pombe$ and 95 $\mu M$ vs $M. tuberculosis$ LS (Talukdar et al., 2009)) used for initial co-crystallisation studies.