



**S3 Fig. MutY gene neighbor YggX.**

Structural homology for *Ec* YggX (left) and nearest neighbor to *Thiotrichaceae* MutY (right). The solution NMR structure for *Ec* YggX (PDB ID 1yhd) [103] is superimposable to the structure predicted by *Colabfold* for the nearest neighbor to *Thiotrichaceae* MutY, with RMSD of 0.99 Å for 69 pruned pairs selected from 88 possible pairs. The Cys residue critical for function is highlighted with a yellow sphere for the sulfhydryl group.