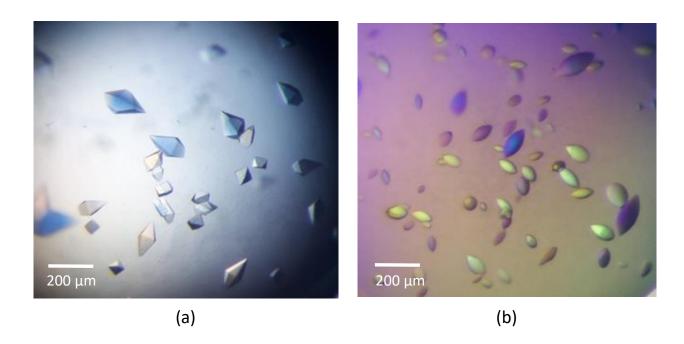
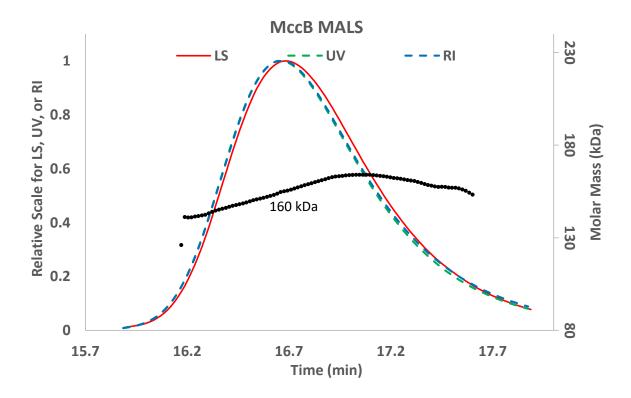
## Figure S1

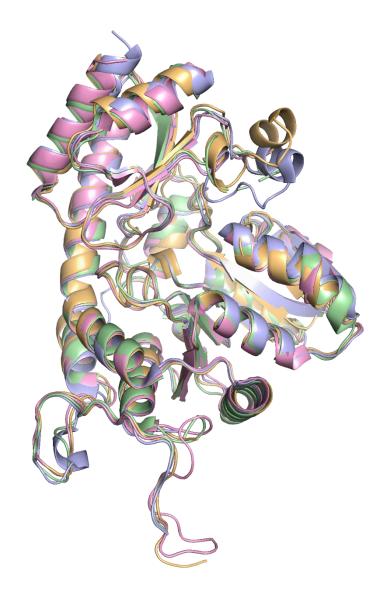


**Figure S1**: Crystals of SaMccB. **(a)** The approximate dimension of the apo SaMccB crystals is 0.18mm. **(b)** The approximate dimension of the PLP-bound SaMccB crystals is 0.15 mm. The scale bar represents 0.2 mm, as indicated.



**Figure S2**: SEC-MALS results with purified SaMccB protein, at a flow rate of 0.5 mL/min. The elution volume from the SEC column is expressed on the x-axis. The relative values of light scattering, UV, and refractive index, indicating the concentration of the protein, are expressed on the left y-axis. The molecular masses (black dots) based on the multi-angle light scattering are expressed on the right y-axis.

## Figure S3



**Figure S3**: The Superimposition of SaMccB(Yellow) with the structures of XoMetC (green, 0.799Å RMSD, PDB code: 4IXZ), HpCGS (pink, 0.713Å RMSD, PDB code: 4L0O) and Human CGL (blue, 0.827Å RMSD, PDB code: 2NMP).