



**Figure S1:** SDS-Page analysis of purified biocatalysts. Analysis performed using Mini-Protean TGX Stain-Free Precast gel, 4-20% acrylamide (Biorad), with electrophoresis performed at 250v for 25min. 10µg of protein loaded per sample well. Compared against 10µl of Precision Plus Protein™ Unstained Protein Standard (Biorad). Imaged using a Biorad Chemidock MP on the stain free protein gel setting. Expected molecular weights (kDa) as follows: CARtp: 120.09, CARse: 130.56., PA0254: 56.79, PA0254<sup>N318C</sup>: 57.04.