

Supporting Information for

Examination of the Catalytic Role of the Axial Cys ligand in the Co-type Nitrile Hydratase from *Pseudonocardia thermophila* JCM 3095[†]

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The purity of the protein samples was analyzed using SDS-PAGE and the enzyme were ~95% pure as shown in figure S1

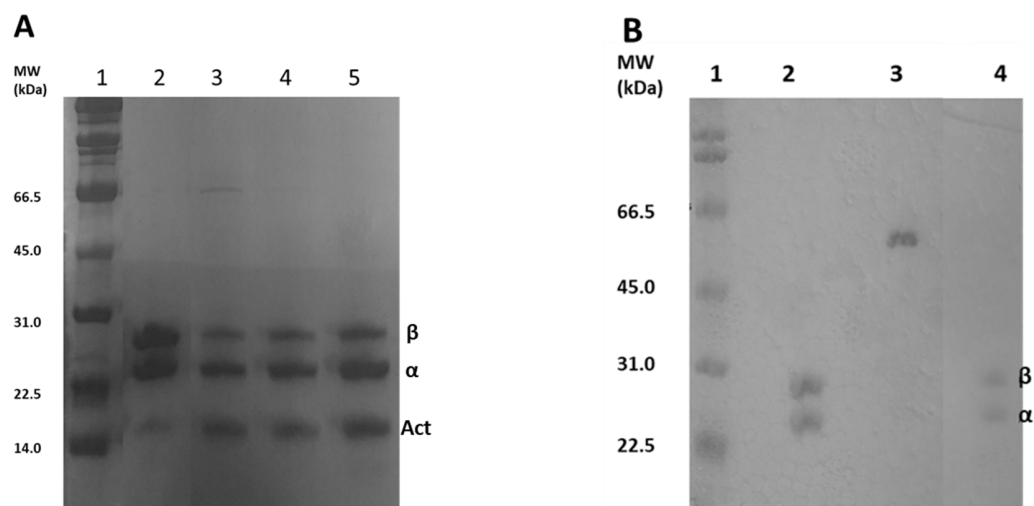


Figure S1: SDS-PAGE for the purified *Pt*NHase wildtype and mutants (A) 1) protein ladder, 2) wildtype, 3) αCys108His, 4) αCys108Met, and αCys108Ser (B) 1) protein ladder, 2) wildtype, 3) αSer162A^B, and 4) αSer162A^A

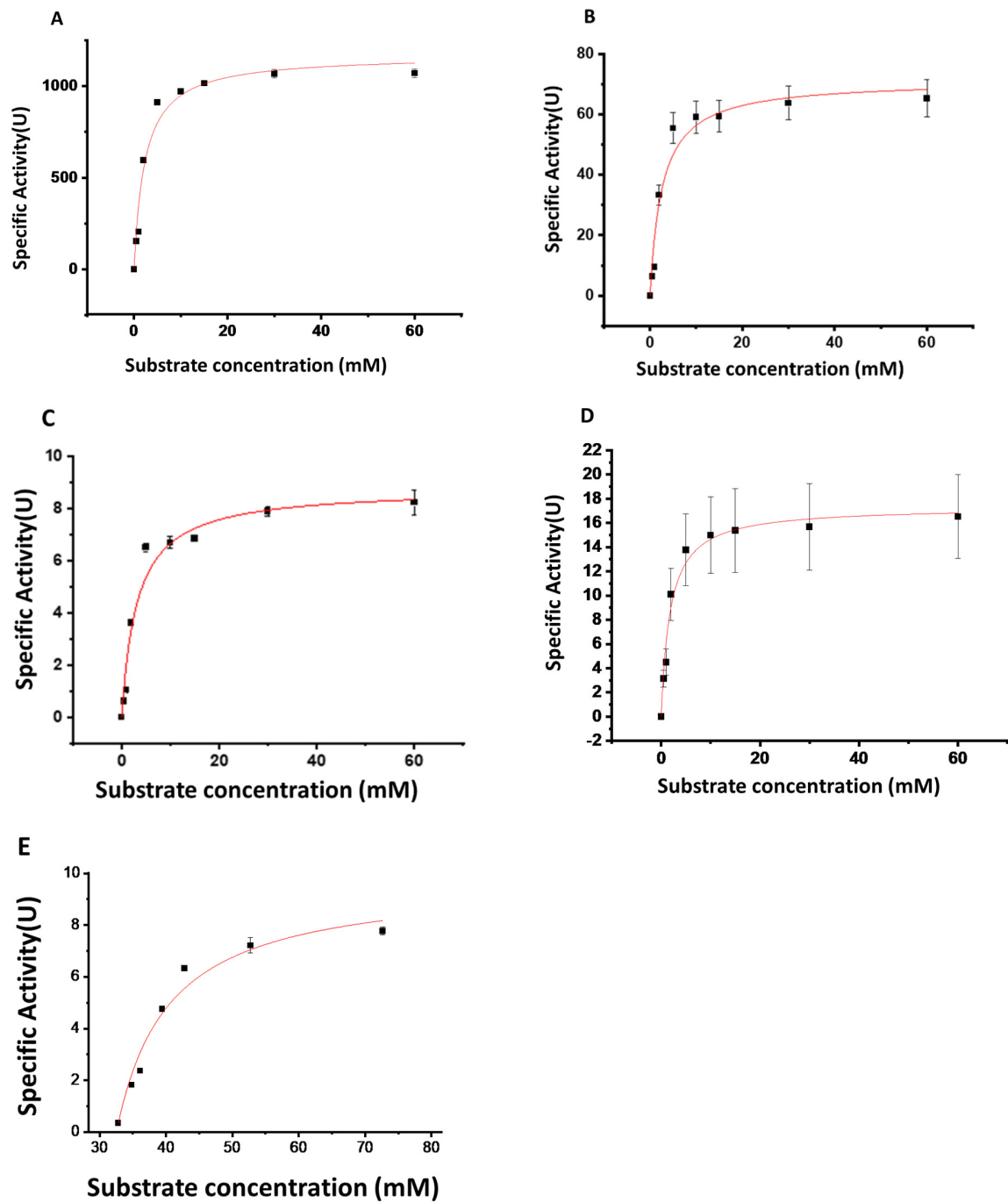


Figure S2: Michaelis-Menten graphs for *Pt*NHase protein samples (A) wildtype, (B) α Cys108His, (C) α Cys108Met, (D) α Cys108Ser and (E) α Ser162A^B. The kinetic constants V_{\max} and K_m were calculated by fitting these data to the Michaelis-Menten equation using OriginPro 9.0 (OriginLab, Northampton, MA).