

Supporting Information

***Staphylococcus aureus* CidC is a putative pyruvate:menaquinone oxidoreductase**

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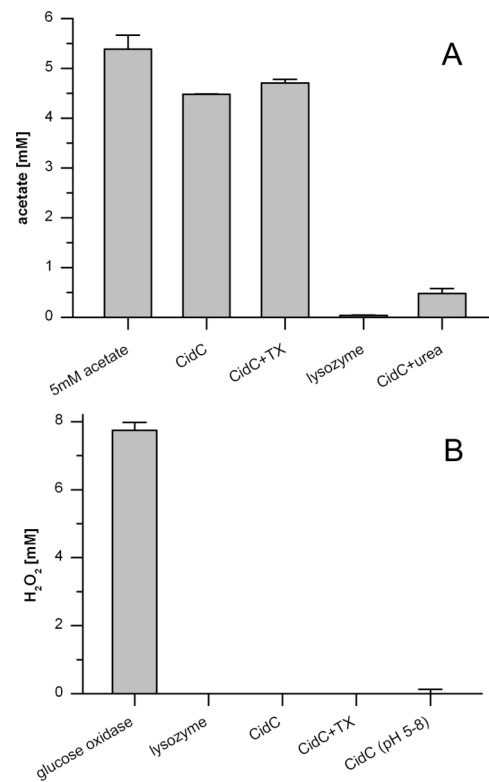


Figure S1. Products of the CidC enzyme. The production of either (A) acetate or (B) H₂O₂ by CidC was measured. (A) 5 mM acetate was used as a positive control. Acetate production was then measured as catalyzed by CidC, CidC with Triton X-100 (CidC+TX), lysozyme (negative control) and 3 M urea-denatured CidC (CidC+urea). (B) H₂O₂ production as catalyzed by glucose oxidase (positive control), lysozyme (negative control), CidC, CidC with Triton X-100 (CidC+TX). A range of pH values from 5 to 8 in steps of 0.25 was investigated for CidC, but no H₂O₂ levels were detected and the data is shown in aggregate as an average and labeled CidC (pH 5-8).

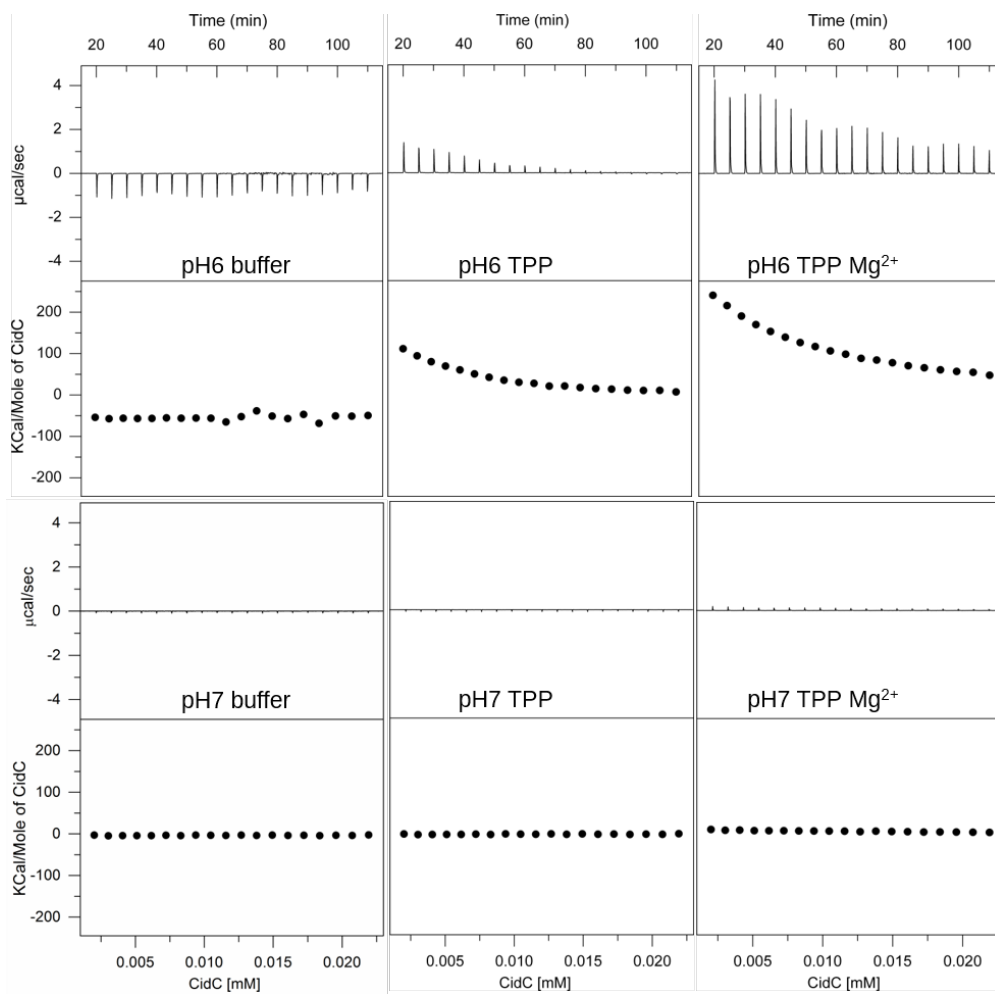


Figure S2. ITC studies of the TPP/Mg²⁺ binding to CidC. CidC in pH 7 buffer is injected into pH 6 or pH 7 buffer containing nothing else, TPP, TPP/Mg²⁺. Each panel contains (top) the raw ITC data and (bottom) the integrated ITC data. The x-axis is labeled as both the timing of the injection and the CidC concentration in the ITC cell.

Table S1. p*K*_a values of CidC catalyzed reaction.

	p <i>K</i> _{HE}	p <i>K</i> _{H₂E}	p <i>K</i> _{HES}	p <i>K</i> _{H₂ES}
-liposome ^a	5.6	5.4	7.4	4.2
+liposome ^a	5.9	5.1	7.2	4.0

^aall pH values with ± 0.2 pH unit errors