Supporting Information

Staphylococcus aureus CidC is a putative pyruvate:menaquinone oxidoreductase

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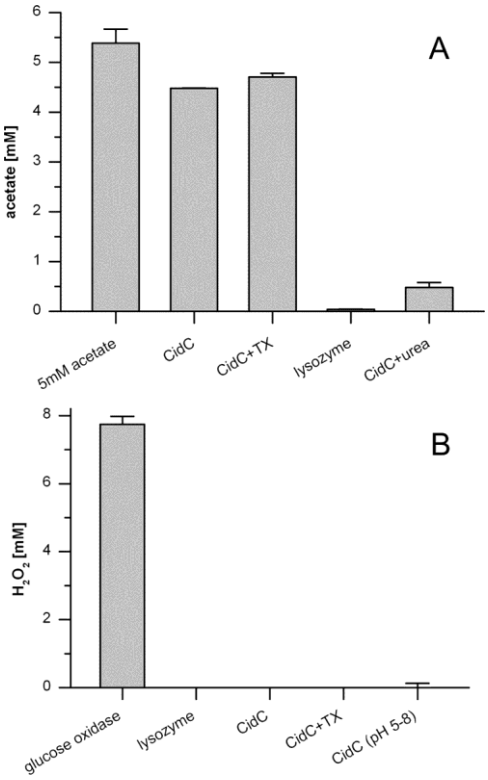

Figure S1. Products of the CidC enzyme. The production of either (A) acetate or (B) H_2O_2 by CidC was measured. (A) 5 mM acetate was used as a positive control. Acetate production was then measured as catalyzed by CidC, CidC with Triton X-100 (CidC+TX), lysozyme (negative control) and 3 M urea-denatured CidC (CidC+urea). (B) H_2O_2 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

H_2O_2 levels were detected and the data is shown in aggregate as an average and labeled CidC (pH 5-8).

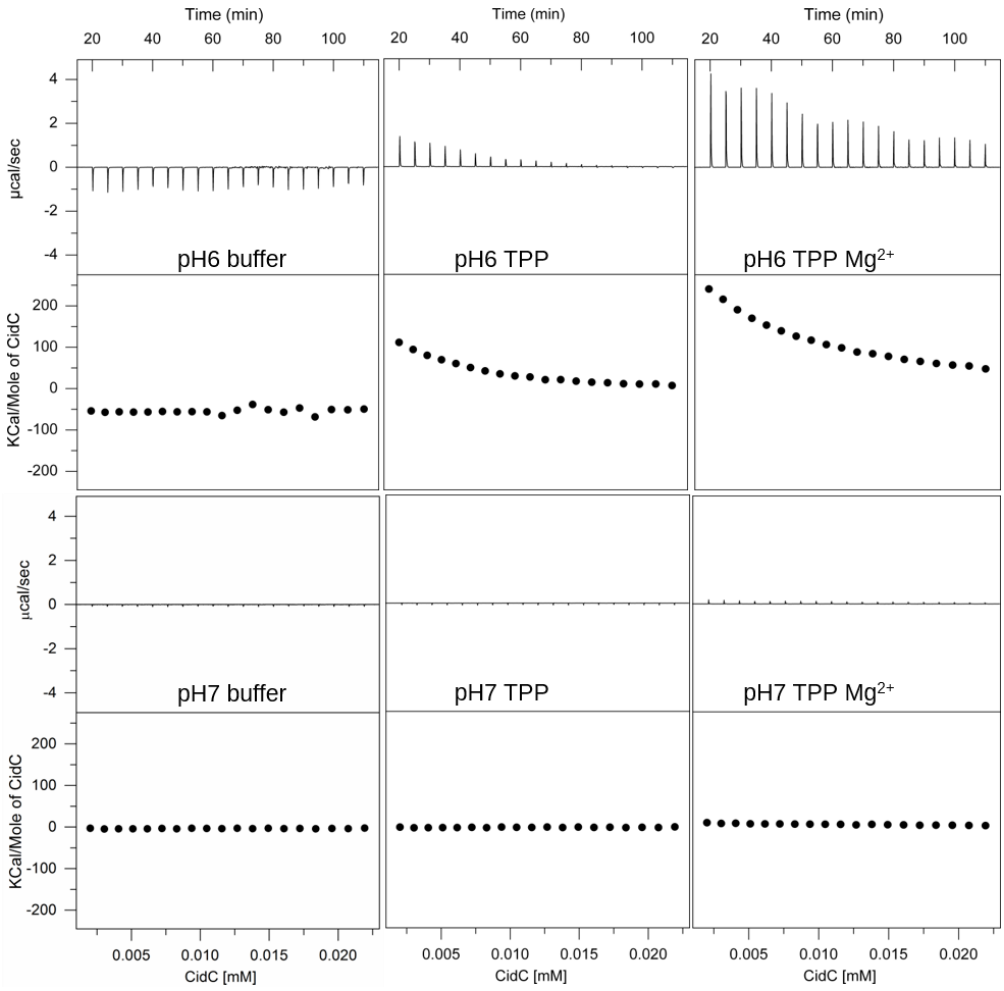

Figure S2. ITC studies of the TPP/Mg^{2+} binding to CidC. CidC in pH 7 buffer is injected into pH 6 or pH 7 buffer containing nothing else, TPP, TPP/Mg^{2+}. Each panel contains (top) the raw ITC data and (bottom) the integrated ITC data. The x-axis is labeled as both the timing of the injection and the CidC concentration in the ITC cell.

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

	pK_{HE}	pK_{H2E}	pK_{HES}	pK_{H2ES}
-liposome[a]	5.6	5.4	7.4	4.2
+liposome[a]	5.9	5.1	7.2	4.0

[a]all pH values with ± 0.2 pH unit errors