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Supporting information for article:

**Overproduction, crystallization and X-ray diffraction data analysis
of ectoine synthase from the cold-adapted marine bacterium
*Sphingopyxis alaskensis***

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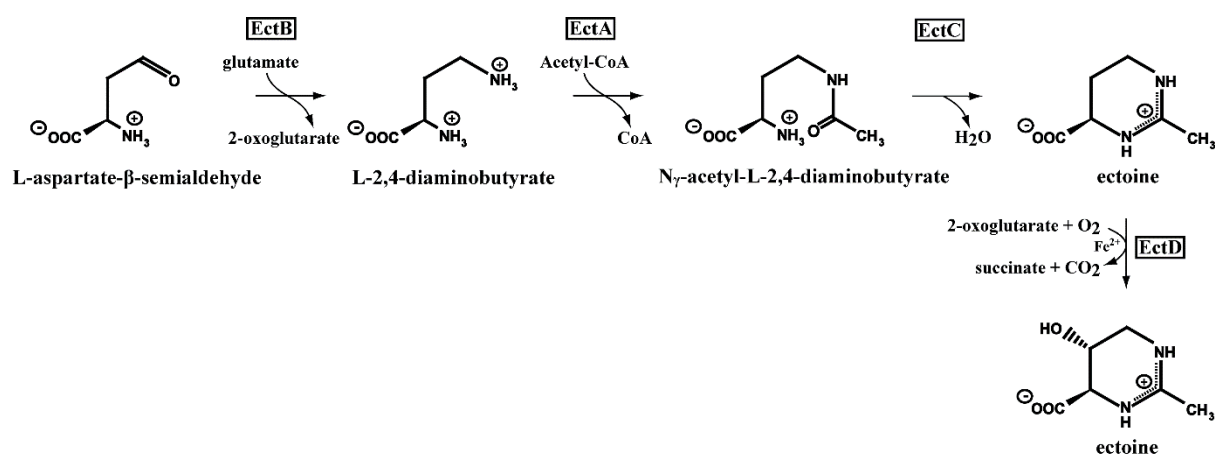


Figure S1 Schemes of the ectoine and 5-hydroxyectoine biosynthesis pathways. In the first step of the ectoine biosynthetic pathway, the EctB enzyme (L-2,4-diaminobutyrate transaminase;) catalyzes the transamination from glutamate to L-aspartate- β -semialdehyde thereby yielding L-2,4-diaminobutyrate. This reaction product is then in the second step acetylated by the EctA enzyme (L-2,4-diaminobutyrate-N γ -acetyltransferase;) to form N γ -acetyl-L-2,4-diaminobutyrate, the substrate for the ectoine synthase (EctC). The EctC enzyme catalyzes the elimination of a water molecule from N γ -acetyl-L-2,4-diaminobutyrate leading to ring closure and ectoine formation. 5-Hydroxyectoine can be formed from ectoine by the ectoine hydroxylase (EctD; EC 1.14.11) in a subgroup of the ectoine-producing microorganisms.