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Author <b>Eric Wiktelius</b>		
Title (English) Cloning, characterisation and folding of glutathione transferase from thermophilic microorganisms		
Title (Swedish)		
Abstract <p>Glutathione transferases (GSTs) belong to an ancient enzyme family. Among their functions is an important role in the detoxification process, by conjugating glutathione to the toxin and thereby facilitating transport out of the cell. This study focuses on prokaryotic GSTs. Particularly interesting for folding and stability is the possible thermal stability that may be expected from a GST from a thermophilic organism. GSTs from thermophilic cyanobacteria <i>Thermosynechococcus elongatus</i> and its mesophilic relative <i>Synechococcus elongatus</i> were cloned, expressed and purified. Both proteins had activity with substrates used to study activity in mammalian GSTs, and a higher thermal stability could be observed with the protein from <i>T. elongatus</i> than with <i>S. elongatus</i>. Stability and refolding were studied through denaturation and renaturing. Even though the experiments were partially successful, method optimisation will be necessary in order to get clear results.</p>		
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