

## Accepted Manuscript

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PII: S0141-8130(17)32733-2  
DOI: <https://doi.org/10.1016/j.ijbiomac.2017.10.063>  
Reference: BIOMAC 8358

To appear in: *International Journal of Biological Macromolecules*

Received date: 25-7-2017  
Revised date: 6-10-2017  
Accepted date: 11-10-2017

Please cite this article as: Raphael J.Eberle, Liege A.Kawai, Fabio R.de Moraes, Ljubica Tasic, Raghuvir K.Arni, Monika A.Coronado, Biochemical and biophysical characterization of a mycoredoxin protein glutaredoxin A1 from *Corynebacterium pseudotuberculosis*, *International Journal of Biological Macromolecules* <https://doi.org/10.1016/j.ijbiomac.2017.10.063>

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# Biochemical and biophysical characterization of a mycoredoxin protein Glutaredoxin A1 from *Corynebacterium pseudotuberculosis*

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## Highlights

- *Cp*-GrxA1 was identified as a mycoredoxin protein.
- Description of the *Cp*-GrxA1 reduction assay by ESH.
- Identification and characterization of inhibitory effects of suramin, heparin, hesperidin, and hesperetin on *Cp*-GrxA1 using biochemical and biophysical methods.

## Abstract

Glutaredoxin A1 from *Corynebacterium pseudotuberculosis* was shown to be a mycoredoxin protein. In this study, we established a process to overexpress and purify glutaredoxin A1. The aim of this study was the investigation of the Glutaredoxin A1 from *C. pseudotuberculosis* behavior under different redox environments and the identification of lead molecules, which can be used for specific inhibitor development for this protein family. A quantitative assay was performed measuring the rate of insulin

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