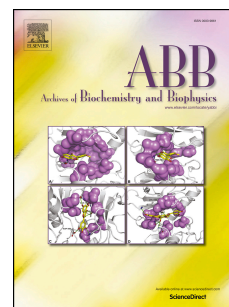


Accepted Manuscript

Reduction of quinones and nitroaromatic compounds by *Escherichia coli* nitroreductase A (NfsA): Characterization of kinetics and substrate specificity

Benjaminas Valiauga, Elsie M. Williams, David F. Ackerley, Narimantas Čėnas



PII: S0003-9861(16)30569-0

DOI: [10.1016/j.abb.2016.12.005](https://doi.org/10.1016/j.abb.2016.12.005)

Reference: YABBI 7411

To appear in: *Archives of Biochemistry and Biophysics*

Received Date: 20 June 2016

Revised Date: 9 December 2016

Accepted Date: 12 December 2016

Please cite this article as: B. Valiauga, E.M. Williams, D.F. Ackerley, N. Čėnas, Reduction of quinones and nitroaromatic compounds by *Escherichia coli* nitroreductase A (NfsA): Characterization of kinetics and substrate specificity, *Archives of Biochemistry and Biophysics* (2017), doi: 10.1016/j.abb.2016.12.005.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Reduction of quinones and nitroaromatic compounds by *Escherichia coli* nitroreductase A (NfsA): Characterization of kinetics and substrate specificity

Benjamins Valiauga^a, Elsie M. Williams^b, David F. Ackerley^b, and Narimantas Čėnas^{a*}

^a*Institute of Biochemistry of Vilnius University, Mokslininkų 12, LT-08662 Vilnius, Lithuania;*

^b*Victoria University of Wellington, School of Biological Sciences, Kelburn Parade, New Zealand.*

**Corresponding author, Fax 370-5-2729196, e-mail narimantas.cenas@bchi.vu.lt*

Abbreviations used: ArNO₂, nitroaromatic compound; FAD, flavin adenine dinucleotide; FMN, flavin mononucleotide; k_{cat} , the apparent catalytic constant; $k_{\text{cat}}/K_{\text{m}}$, the bimolecular rate constant in the steady-state enzymatic reactions; NR, nitroreductase; Q, quinone; SOD, superoxide dismutase; TNT, 2,4,6-trinitrotoluene;

Running title: Quinone- and nitroreductase reactions of *E. coli* NfsA

Keywords: NfsA; Quinones; Nitroaromatic compounds; CB-1954; Bioreductive activation;

Download English Version:

<https://daneshyari.com/en/article/5504456>

Download Persian Version:

<https://daneshyari.com/article/5504456>

[Daneshyari.com](https://daneshyari.com)