

NUDT18 hydrolyses 8-oxo-GDP to 8-oxo-GMP

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Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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Literature references

Fabregat, A., Sidiropoulos, K., Viteri, G., Forner, O., Marin-Garcia, P., Arnau, V. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics*, 18, 142. [↗](#)

Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)

Fabregat, A., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res*, 46, D649-D655. [↗](#)

Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 88

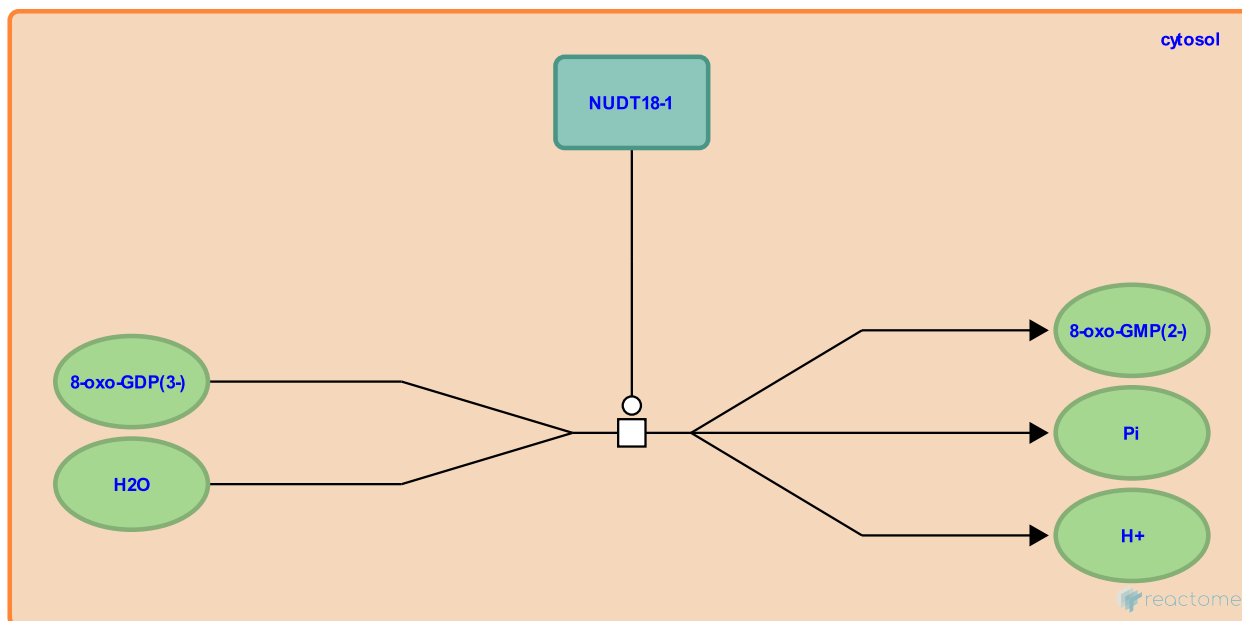
This document contains 1 reaction ([see Table of Contents](#))

NUDT18 hydrolyses 8-oxo-GDP to 8-oxo-GMP [↗](#)

Stable identifier: R-HSA-2395873

Type: transition

Compartments: cytosol



NUDT18 (MTH3) catalyzes the reaction of 8-oxo-GDP and water to form 8-oxo-GMP and Pi (orthophosphate) (Takagi et al. 2012). The subcellular location of NUDT18 has not been established but is assumed to be cytosolic like NUDT1.

Literature references

Takagi, Y., Ito, R., Sekiguchi, M., Yamagata, Y., Setoyama, D., Kamiya, H. (2012). Human MTH3 (NUDT18) Protein Hydrolyzes Oxidized Forms of Guanosine and Deoxyguanosine Diphosphates: COMPARISON WITH MTH1 AND MTH2. *J. Biol. Chem.*, 287, 21541-9. [↗](#)

Editions

2012-07-06	Authored, Edited	D'Eustachio, P.
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