

NUDT1 hydrolyses 2-oxo-ATP to 2-oxo- AMP

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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

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Reactome database release: 88

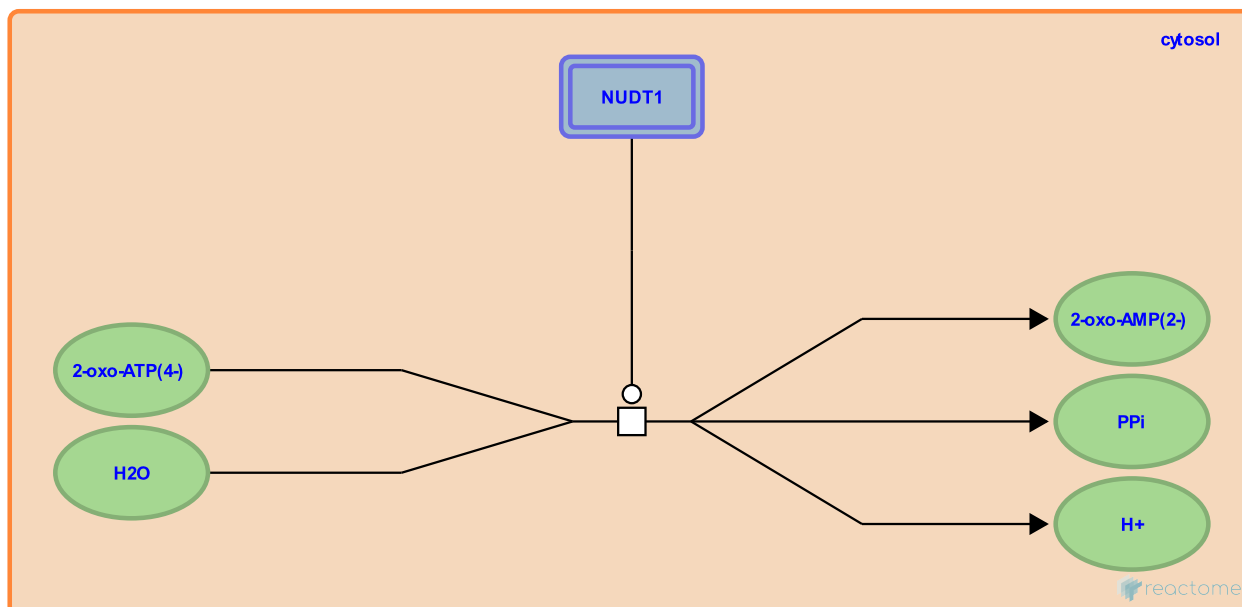
This document contains 1 reaction ([see Table of Contents](#))

NUDT1 hydrolyses 2-oxo-ATP to 2-oxo-AMP [↗](#)

Stable identifier: R-HSA-2395872

Type: transition

Compartments: cytosol



NUDT1 (MTH1) catalyzes the reaction of 2-oxo-ATP and water to form 2-oxo-AMP and PPi (pyrophosphate). Four NUDT1 proteins have been identified, encoded by a single gene with alternative start codons (Oda et al. 1999). The shortest of these, NUDT1 p18, has been shown to catalyze hydrolysis of 2-oxo-ATP (Fujikawa et al. 2001). The active enzyme is a monomer associated with a magnesium ion (Mishima et al. 2004). The longer isoforms all consist of the p18 polypeptide with aminoterminal extensions and are presumed to be active as well, but have not been experimentally characterized. The p18 isoform is predominantly cytosolic (Kang et al. 1995).

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Editions

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|------------|------------------|-----------------|
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