

# ADAT1 deaminates adenosine-37 in tRNA(Ala)

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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](#))

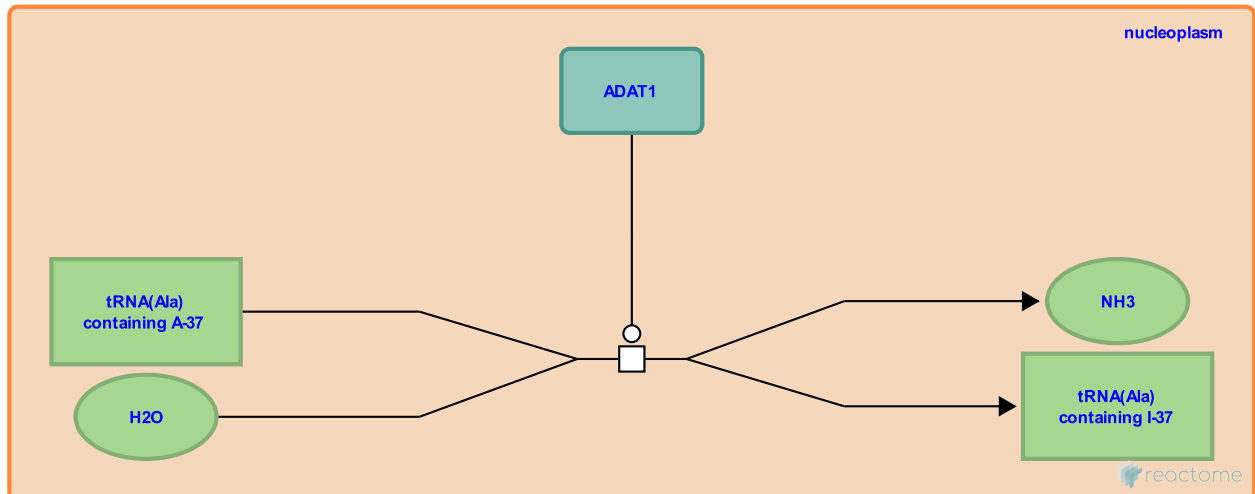
## ADAT1 deaminates adenosine-37 in tRNA(Ala) ↗

**Stable identifier:** R-HSA-6782336

**Type:** transition

**Compartments:** nucleoplasm

**Inferred from:** TAD1 deaminates adenosine-37 in tRNA(Ala) yielding inosine-37 (*Saccharomyces cerevisiae*)



ADAT1 deaminates adenosine-37 of tRNA(Ala) yielding inosine-37, which may then be methylated to N1-methylinosine-37 (Maas et al. 1999). The homologue in *Saccharomyces*, Tad1p, catalyzes the same reaction, indicating the deamination of adenosine-37 is highly conserved in eukaryotes.

### Literature references

Gerber, AP., Maas, S., Rich, A. (1999). Identification and characterization of a human tRNA-specific adenosine deaminase related to the ADAR family of pre-mRNA editing enzymes. *Proc. Natl. Acad. Sci. U.S.A.*, 96, 8895-900. ↗

### Editions

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