

PUS7 transforms uridine to pseudouridine in tRNAs

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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](#))

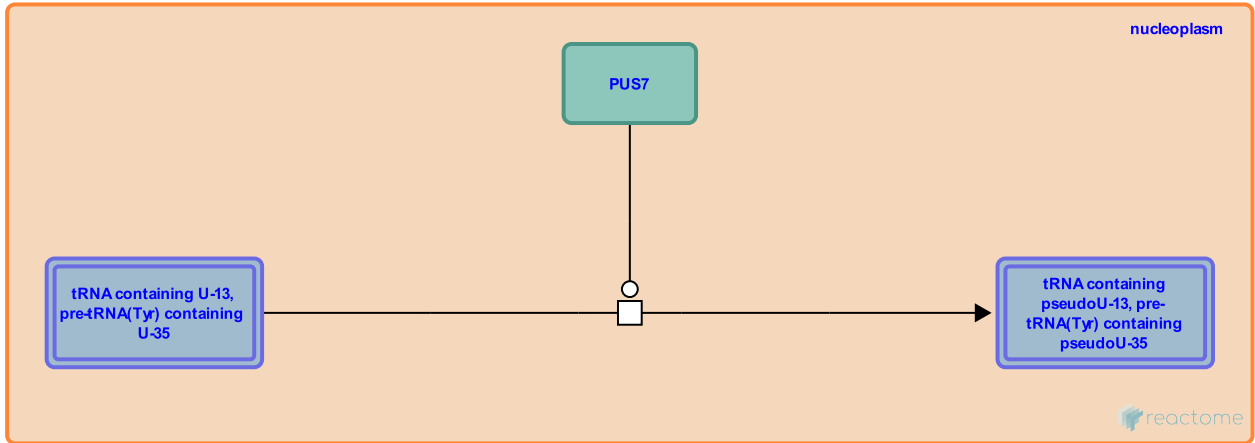
PUS7 transforms uridine to pseudouridine in tRNAs

Stable identifier: R-HSA-6786583

Type: transition

Compartments: nucleoplasm

Inferred from: PUS7 transforms uridine to pseudouridine at nucleotide 13 of tRNA (Saccharomyces cerevisiae)



As inferred from the homologue in *Saccharomyces cerevisiae*, PUS7 converts uridine to pseudouridine at nucleotide 13 of cytoplasmic tRNA and at nucleotide 35 of unspliced tRNA(Tyr). PUS7 also synthesizes pseudouridine in U2 snRNA and in pre-tRNA(Tyr). Pus7p is a nuclear protein according to global analysis of protein locations in yeast.

Editions

2015-06-30	Authored, Edited	May, B.
2015-08-11	Reviewed	Levinger, L.
2015-08-25	Reviewed	Motorin, Y.
2015-10-24	Reviewed	Jarrous, N.