Ser-tRNA(Sec) is phosphorylated to Sep-tRNA(Sec) by PSTK

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18/05/2024

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.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

Literature references

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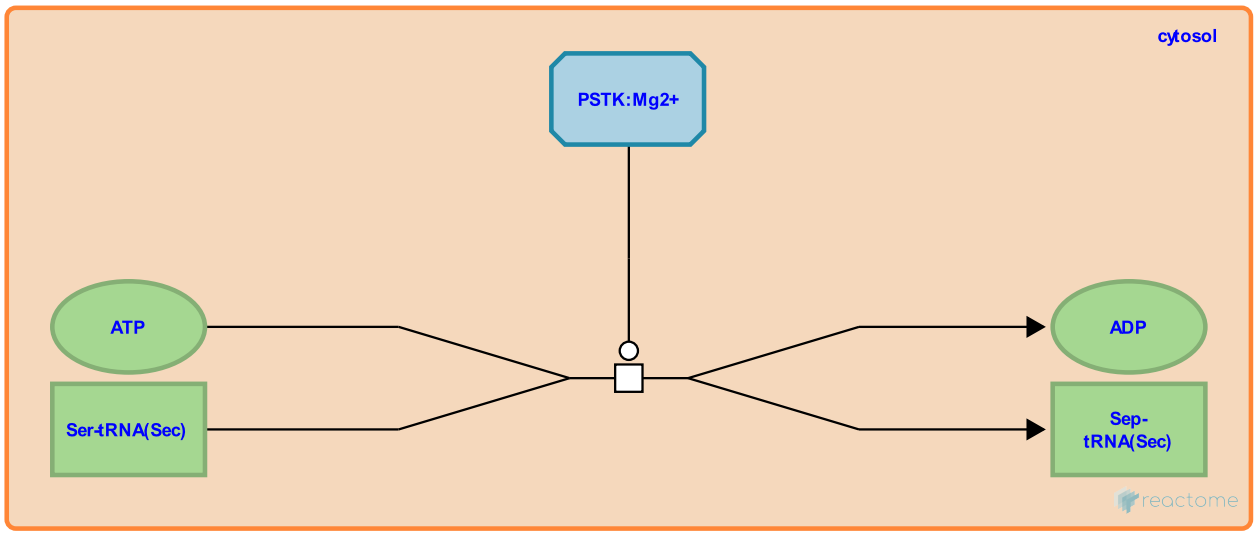
Ser-tRNA(Sec) is phosphorylated to Sep-tRNA(Sec) by PSTK ↗

Stable identifier: R-HSA-2408507

Type: transition

Compartments: cytosol

Inferred from: Ser-tRNA(Sec) is phosphorylated to Sep-tRNA(Sec) by Pstk (Mus musculus)



L-seryl-tRNA(Sec) kinase (PSTK) phosphorylates the serylated transfer RNA (tRNA) for Sec (Ser-tRNASec) to form Sep-tRNASec in the presence of ATP and Mg2+. PSTK exhibits a strict selectivity for Ser-tRNASec. It does not phosphorylate free Ser or Ser attached to its cognate tRNASer. This reaction involving PSTK is inferred from the equivalent reaction in mouse.

Literature references

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Editions

2014-05-06	Authored	Williams, MG.
2015-08-29	Edited	D'Eustachio, P.
2015-08-30	Reviewed	Rush, MG.