RRAGA,B exchanges GDP for GTP

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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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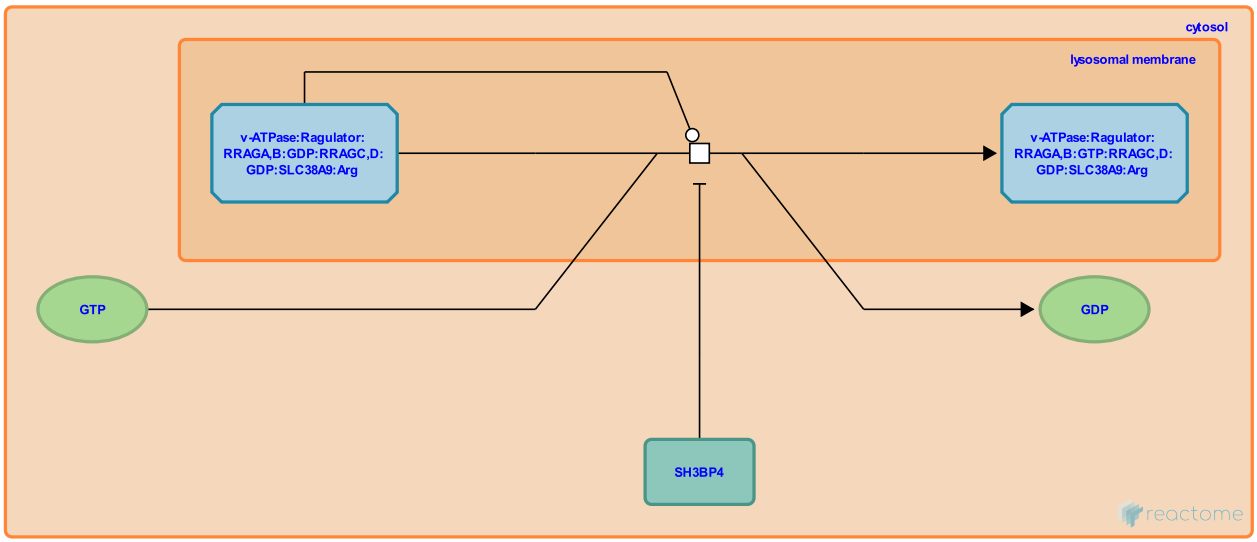
RRAGA,B exchanges GDP for GTP

Stable identifier: R-HSA-9640167

Type: transition

Compartments: lysosomal membrane



Upon binding L-arginine, SLC38A9 acts as a guanyl nucleotide exchange factor (GEF) that enhances the conversion of RRAGA:GDP (RagA:GDP, and by inference RRAGB:GDP, RagB:GDP) to RRAGA:GTP, the active form (Shen and Sabatini 2018). The Ragulator complex also shows GEF activity for RRAGA,B (Bar-Peled et al. 2012). SH3BP4 inhibits loading of GTP onto RRAGB during amino acid starvation (Kim et al. 2012). The binding of GTP by RRAGA,B appears to inhibit binding of GTP by RRAGC,D (Shen et al. 2017).

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Editions

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