

CASTOR1 in CASTOR1:CASTOR2 binds L-arginine and dissociates from GATOR2

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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

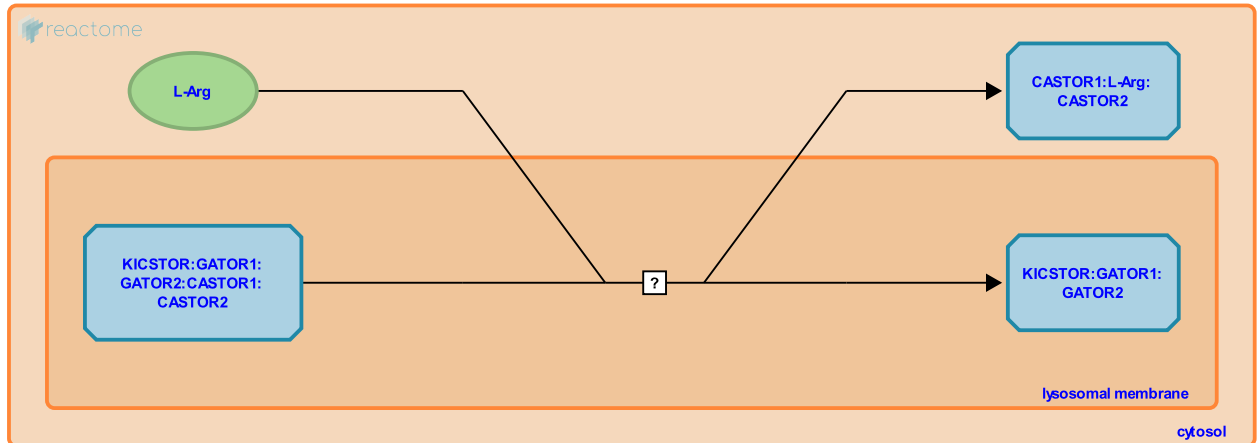
This document contains 1 reaction ([see Table of Contents](#))

CASTOR1 in CASTOR1:CASTOR2 binds L-arginine and dissociates from GATOR2 ↗

Stable identifier: R-HSA-9640237

Type: uncertain

Compartments: lysosomal membrane



CASTOR1 in a heterodimer with CASTOR2 interacts with the GATOR2 complex via the MIOS subunit of GATOR2 (Chantranupong et al. 2016, Gai et al. 2016). The ACT domains of the CASTOR1 subunit bind L-arginine (Chantranupong et al. 2016, Saxton et al. 2016, Xia et al. 2016, Gai et al. 2016) and CASTOR1:arginine dissociates from GATOR2, which then prevents GATOR1 from activating the GTPase of RRAGA,B (Chantranupong et al. 2016). GATOR1 is recruited to the lysosomal membrane by the KICSTOR complex (Wolfson et al. 2017).

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Editions

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