ACO1:4Fe-4S isomerises CIT to ISCIT

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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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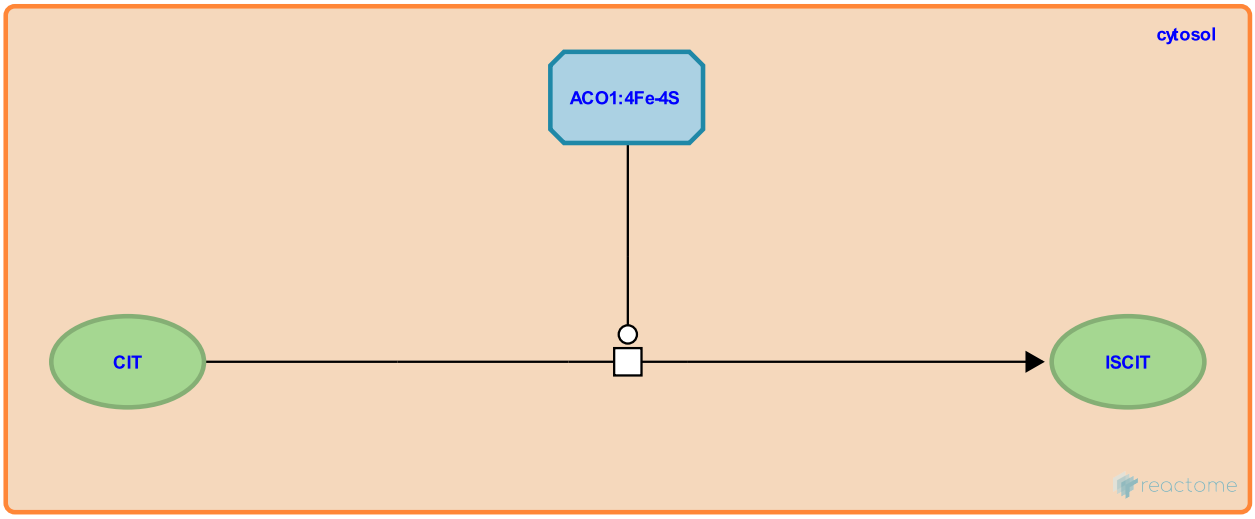
Stable identifier: R-HSA-5690911

Type: transition

Compartments: cytosol



Cytoplasmic aconitate hydratase (ACO1, iron regulatory protein 1, IRP1) functions either as an RNA binding protein that regulates the uptake, sequestration, and utilisation of iron or an enzyme that isomerises citrate to isocitrate, depending on changes in cellular iron levels. Under iron-replete conditions, ACO1 binds the cofactor 4Fe-4S cluster and acts as an aconitase, isomerising citrate (CIT) to isocitrate (ISCIT) (Kaptain et al. 1991, Philpott et al. 1994, Dupuy et al. 2006).

Literature references

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Editions

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