Mitochondrial iron-sulfur cluster biogenesis
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


Reactome database release: 83

This document contains 2 pathways and 3 reactions (see Table of Contents)
Mitochondrial iron-sulfur cluster biogenesis

Stable identifier: R-DRE-1362409

Compartments: mitochondrial inner membrane, mitochondrial matrix, mitochondrial intermembrane space

Inferred from: Mitochondrial iron-sulfur cluster biogenesis (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp
Frataxin binds iron

**Location:** Mitochondrial iron-sulfur cluster biogenesis

**Stable identifier:** R-DRE-1362416

**Type:** binding

**Compartments:** mitochondrial matrix

**Inferred from:** Frataxin binds iron (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

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**Followed by:** FXN:NFS1:ISD11:ISCU assembles 2Fe-2S iron-sulfur cluster
Electron transport from NADPH to Ferredoxin

Location: Mitochondrial iron-sulfur cluster biogenesis

Stable identifier: R-DRE-2395516

Compartments: mitochondrial matrix

Inferred from: Electron transport from NADPH to Ferredoxin (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

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FXN:NFS1:ISD11:ISCU assembles 2Fe-2S iron-sulfur cluster

**Location:** Mitochondrial iron-sulfur cluster biogenesis

**Stable identifier:** R-DRE-1362408

**Type:** omitted

**Compartments:** mitochondrial matrix

**Inferred from:** FXN:NFS1:ISD11:ISCU assembles 2Fe-2S iron-sulfur cluster (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: [http://www.pantherdb.org/about.jsp](http://www.pantherdb.org/about.jsp)

**Preceded by:** Frataxin binds iron
**Formation of 4Fe-4S cluster on ISCA1:ISCA2**

**Location:** Mitochondrial iron-sulfur cluster biogenesis

**Stable identifier:** R-DRE-8878815

**Type:** transition

**Compartments:** mitochondrial matrix

**Inferred from:** Formation of 4Fe-4S cluster on ISCA1:ISCA2 (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp
# Table of Contents

- Introduction
- Mitochondrial iron-sulfur cluster biogenesis
  - Frataxin binds iron
  - Electron transport from NADPH to Ferredoxin
  - FXN:NFS1:ISD11:ISCU assembles 2Fe-2S iron-sulfur cluster
  - Formation of 4Fe-4S cluster on ISCA1:ISCA2

Table of Contents