

CYBRD1:Heme reduces Fe³⁺ to Fe²⁺

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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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- Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 88

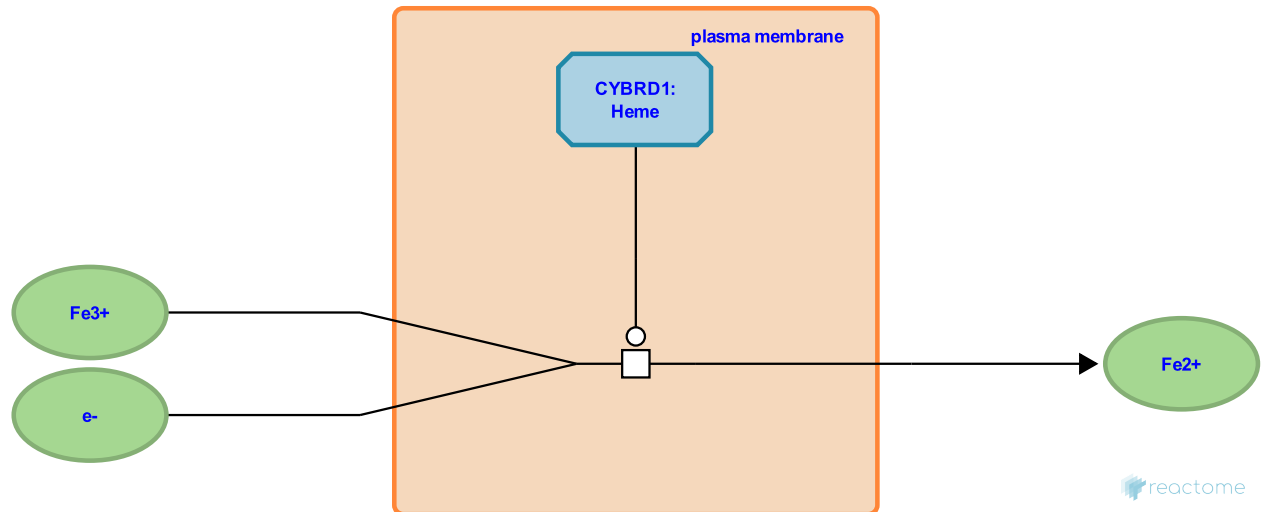
This document contains 1 reaction ([see Table of Contents](#))

CYBRD1:Heme reduces Fe³⁺ to Fe²⁺ ↗

Stable identifier: R-HSA-917805

Type: transition

Compartments: extracellular region, plasma membrane



Cytochrome b reductase 1 not only reduces ferrous iron in the brush-border membrane but also in the airways. It is upregulated on iron starvation. However, its electron donor molecule is still unknown (Oakhill et al, 2007; Turi et al, 2006).

Literature references

McKie, AT., Ghio, AJ., Piantadosi, CA., Mamo, LB., Crissman, K., Wang, X. et al. (2006). Duodenal cytochrome b: a novel ferrireductase in airway epithelial cells. *Am J Physiol Lung Cell Mol Physiol*, 291, L272-80. ↗

McKie, AT., Cammack, R., Gareta, EG., Oakhill, JS., Marritt, SJ. (2008). Functional characterization of human duodenal cytochrome b (Cybrd1): Redox properties in relation to iron and ascorbate metabolism. *Biochim Biophys Acta*, 1777, 260-8. ↗

Editions

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