

HMOX1,2 cleave heme

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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: 74

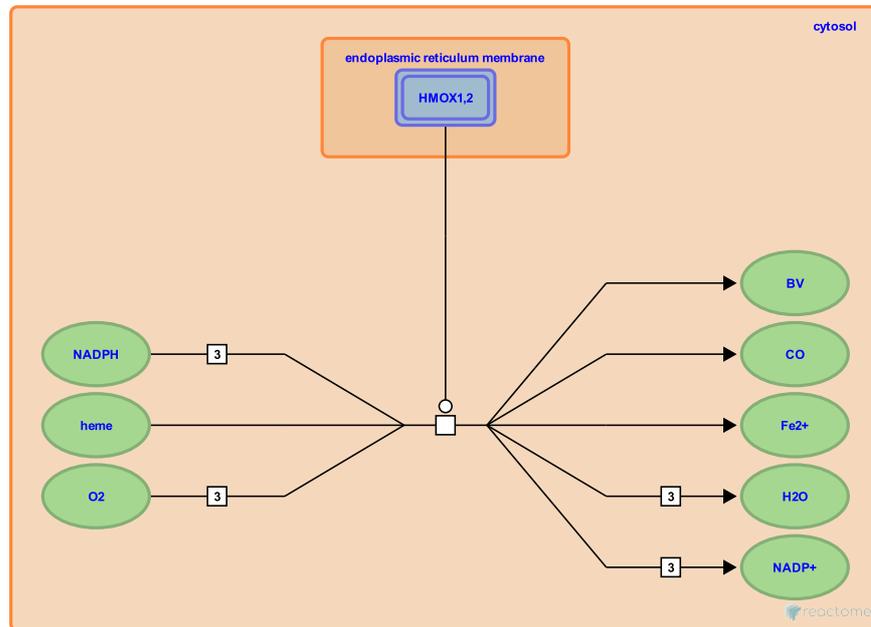
This document contains 1 reaction ([see Table of Contents](#))

HMOX1,2 cleave heme ↗

Stable identifier: R-HSA-189398

Type: transition

Compartments: cytosol, endoplasmic reticulum membrane



Heme oxygenase (HO) cleaves the heme ring at the alpha-methene bridge to form biliverdin. This reaction forms the only endogenous source of carbon monoxide. HO-1 is inducible and is thought to have an antioxidant role as it's activated in virtually all cell types and by many types of "oxidative stress" (Poss and Tonegawa, 1997). HO-2 is non-inducible.

Editions

2007-01-24	Reviewed	Sassa, S.
2009-05-19	Revised	D'Eustachio, P.