

# FTMT 24mer oxidises $4\text{Fe}^{2+}$ to $4\text{Fe}^{(3+)}\text{O}(\text{OH})$

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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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- Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)
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Reactome database release: 88

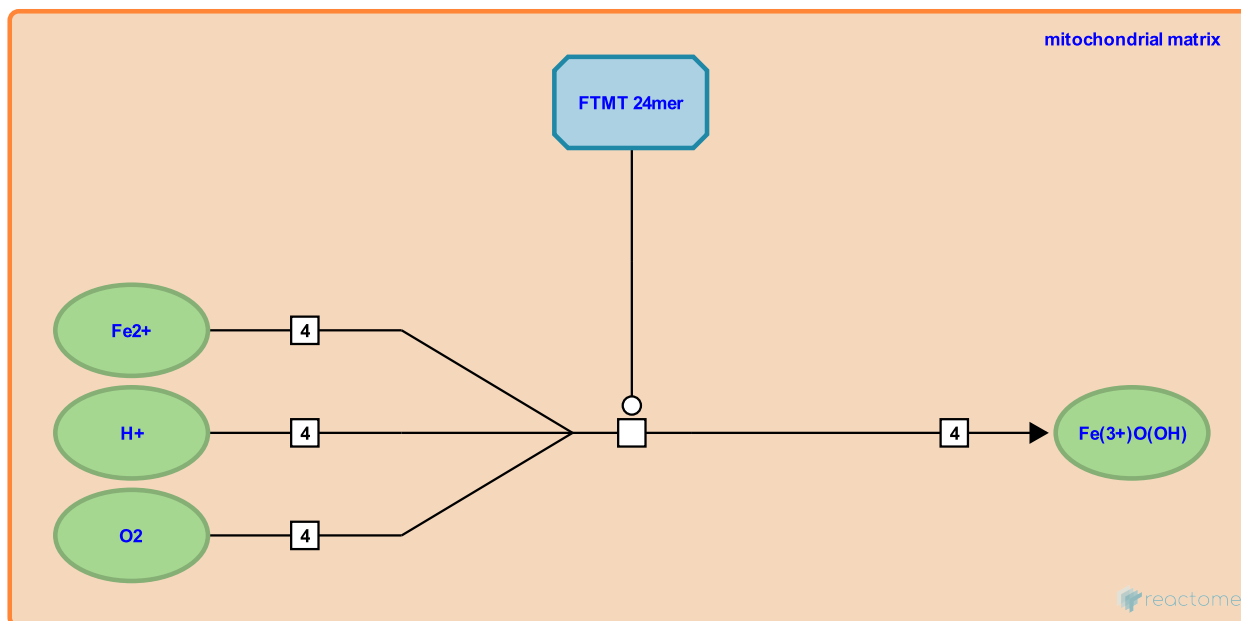
This document contains 1 reaction ([see Table of Contents](#))

## FTMT 24mer oxidises 4Fe<sup>2+</sup> to 4Fe(3+)O(OH) ↗

**Stable identifier:** R-HSA-5691107

**Type:** transition

**Compartments:** mitochondrial matrix



Mitochondrial ferritin (FTMT) is specifically taken up by the mitochondria and processed to a mature protein that assembles into functional ferritin shells. It is a homooligomer of 24 subunits, is roughly spherical and contains a central cavity into which the mineral iron core is deposited. FTMT possesses ferroxidase activity. Iron is taken up in the ferrous form (Fe<sup>2+</sup>) and deposited as ferric hydroxide (Fe(3+)O(OH)) after oxidation. FTMT may play an important role in the regulation of iron homeostasis in the mitochondrion (Levi et al. 2001, Langlois d'Estaintot et al. 2004).

### Literature references

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### Editions

2015-05-05	Authored, Edited	Jassal, B.
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