

# GPX7,8 catalyze peroxidation of P4HB (PDI)

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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., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res*, 46, D649-D655. [↗](#)
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Reactome database release: 88

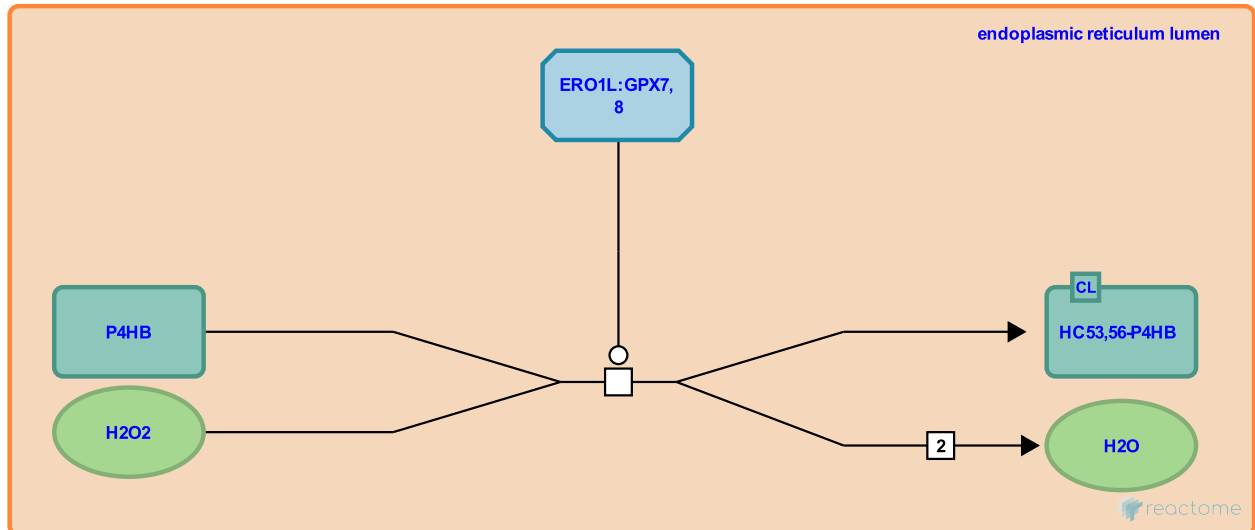
This document contains 1 reaction ([see Table of Contents](#))

## GPX7,8 catalyze peroxidation of P4HB (PDI) ↗

**Stable identifier:** R-HSA-3341296

**Type:** transition

**Compartments:** endoplasmic reticulum lumen



Glutathione peroxidase 7 (GPX7) and GPX8 are atypical glutathione peroxidases that catalyze the peroxidation of protein disulfide isomerases, such as PDI (P4HB) (Nguyen et al. 2011 and inferred from mouse in Bosello-Travain et al. 2013). GPX7 and GPX8 are each able to form heterodimers with the sulfhydryl oxidase ERO1alpha (ERO1L) in the endoplasmic reticulum lumen. It is hypothesized that GPX7 and GPX8 use hydrogen peroxide produced by ERO1L.

### Literature references

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### Editions

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