

GPX4-2 reduces 18(S)-HpEPE to 18(S)- HEPE

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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: 88

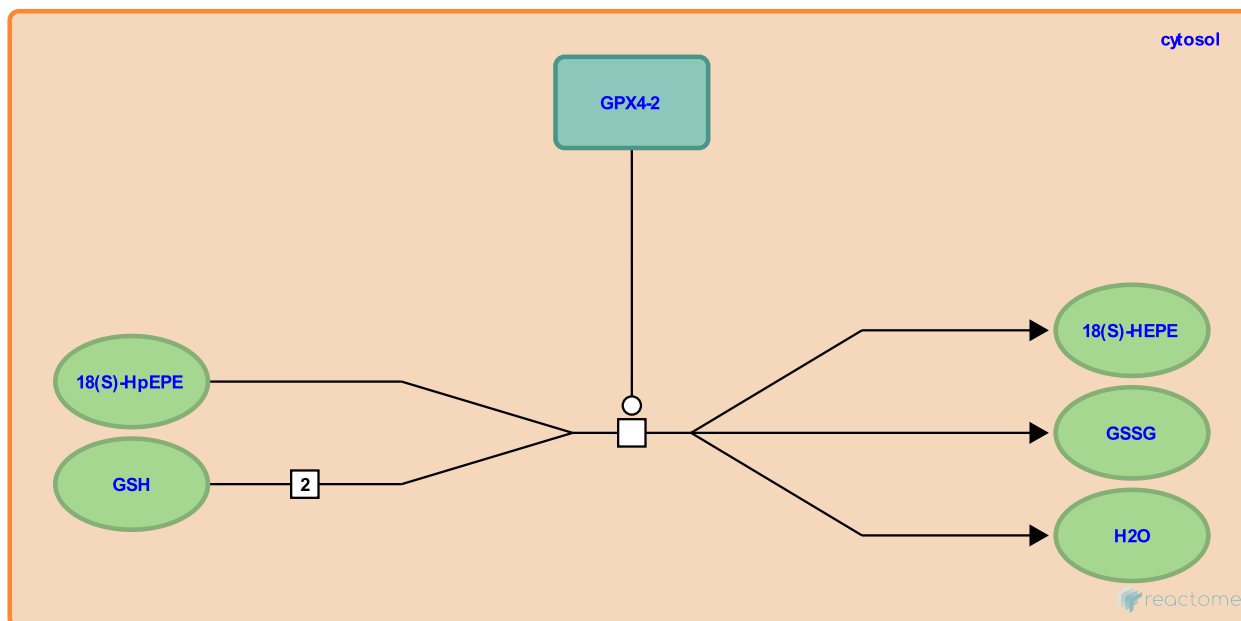
This document contains 1 reaction ([see Table of Contents](#))

GPX4-2 reduces 18(S)-HpEPE to 18(S)-HEPE [↗](#)

Stable identifier: R-HSA-9018868

Type: transition

Compartments: cytosol



In PMNs, cytosolic phospholipid hydroperoxide glutathione peroxidase (GPX4 isoform 2, GPX4-2) (Yagi et al. 1996) is a likely candidate for the reduction of organic hydroperoxides such as 18(S)-HpEPE to 18(S)-hydroxyeicosapentaenoic acid (18(S)-HEPE) (Han et al. 2013) using glutathione (GSH) as an electron donor (Brigelius-Flohe & Maiorino 2013).

Literature references

Hao, Y., Fan, Z., Yu, Y., Huo, R., Han, X., Wei, J. et al. (2013). Expression and characterization of recombinant human phospholipid hydroperoxide glutathione peroxidase. *IUBMB Life*, 65, 951-6. [↗](#)

Nagata, N., Komura, S., Ohishi, N., Sun, Q., Yagi, K., Nishikimi, M. et al. (1996). Expression of human phospholipid hydroperoxide glutathione peroxidase gene for protection of host cells from lipid hydroperoxide-mediated injury. *Biochem. Biophys. Res. Commun.*, 219, 486-91. [↗](#)

Editions

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