

# **ALOX5 dehydrogenates 4(S)-Hp-17(S)- HDHA to 4S(5)-epoxy-17(S)-HDHA**

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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: 75

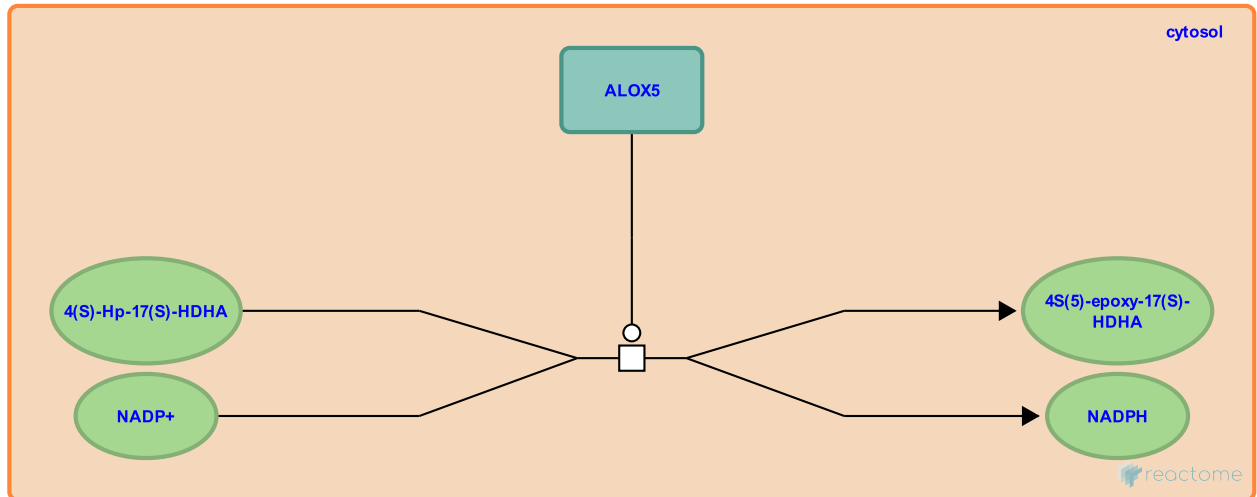
This document contains 1 reaction ([see Table of Contents](#))

## ALOX5 dehydrogenates 4(S)-Hp-17(S)-HDHA to 4S(5)-epoxy-17(S)-HDHA [↗](#)

**Stable identifier:** R-HSA-9020277

**Type:** transition

**Compartments:** cytosol



5-lipoxygenase (ALOX5) possesses dual lipoxygenase activity (Shimizu et al. 1984). In polymorphonuclear (PMN) cells, ALOX5 can epoxygenate (via dehydration) 4(S)-hydroperoxy-17(S)-hydroxydocosahexaenoic acid (4(S)-Hp-17(S)-HDHA) to form 4S(5)-epoxy-17(S)-hydroxydocosahexaenoic acid (4S(5)-epoxy-17(S)-HDHA) (Serhan et al. 2002).

### Literature references

Serhan, CN., Hong, S., Gronert, K., Colgan, SP., Devchand, PR., Mirick, G. et al. (2002). Resolvins: a family of bioactive products of omega-3 fatty acid transformation circuits initiated by aspirin treatment that counter proinflammation signals. *J. Exp. Med.*, 196, 1025-37. [↗](#)

### Editions

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