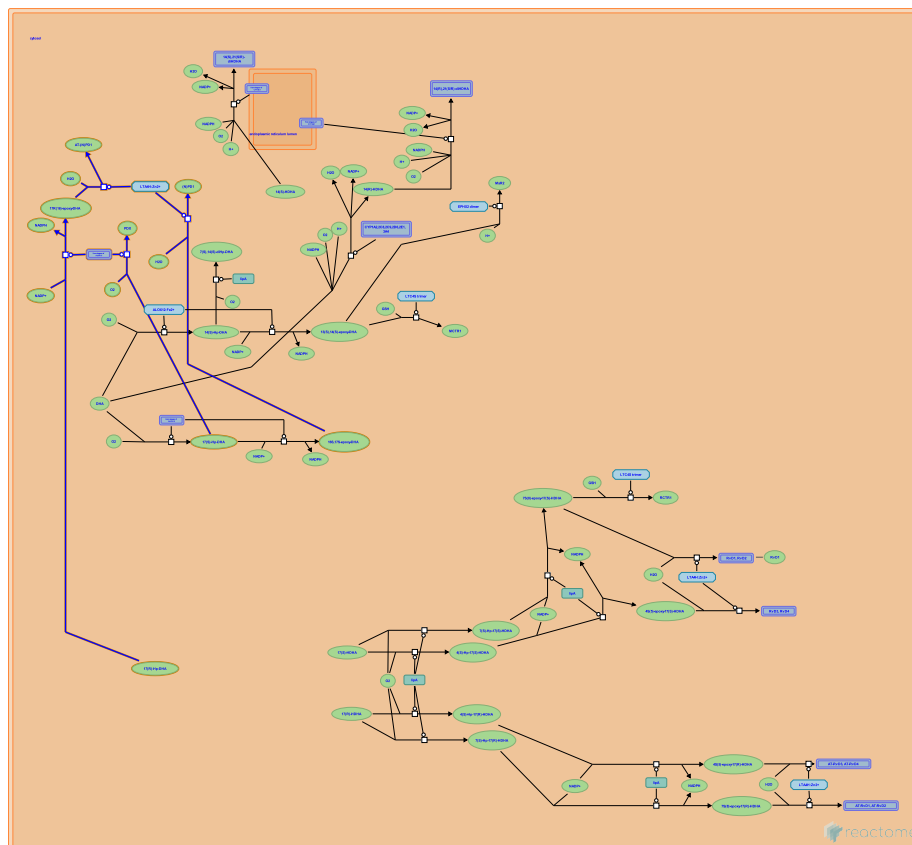


# Biosynthesis of protectins



European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

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This is just an excerpt of a full-length report for this pathway. To access the complete report, please download it at the [Reactome Textbook](#).

21/05/2024

## 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.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

## Literature references

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- Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

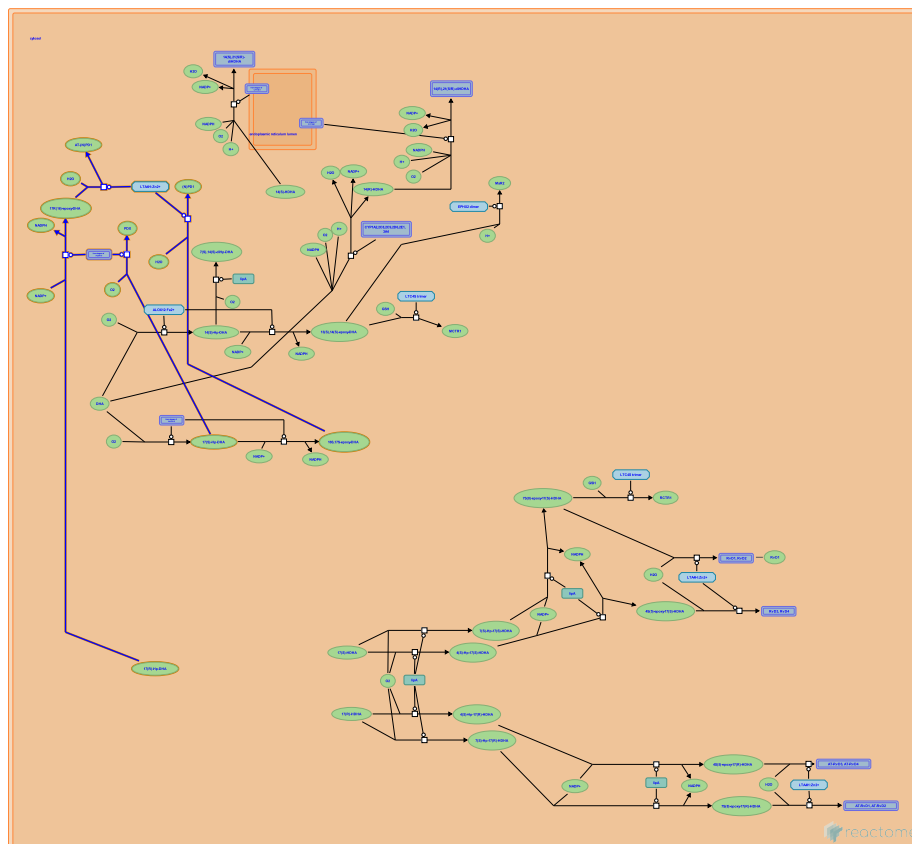
Reactome database release: 88

This document contains 1 pathway and 4 reactions ([see Table of Contents](#))

## Biosynthesis of protectins ↗

**Stable identifier:** R-DDI-9018681

**Inferred from:** Biosynthesis of protectins (Homo sapiens)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](http://www.pantherdb.org/about.jsp) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

## ALOX15 oxidises 17(S)-Hp-DHA to PDX ↗

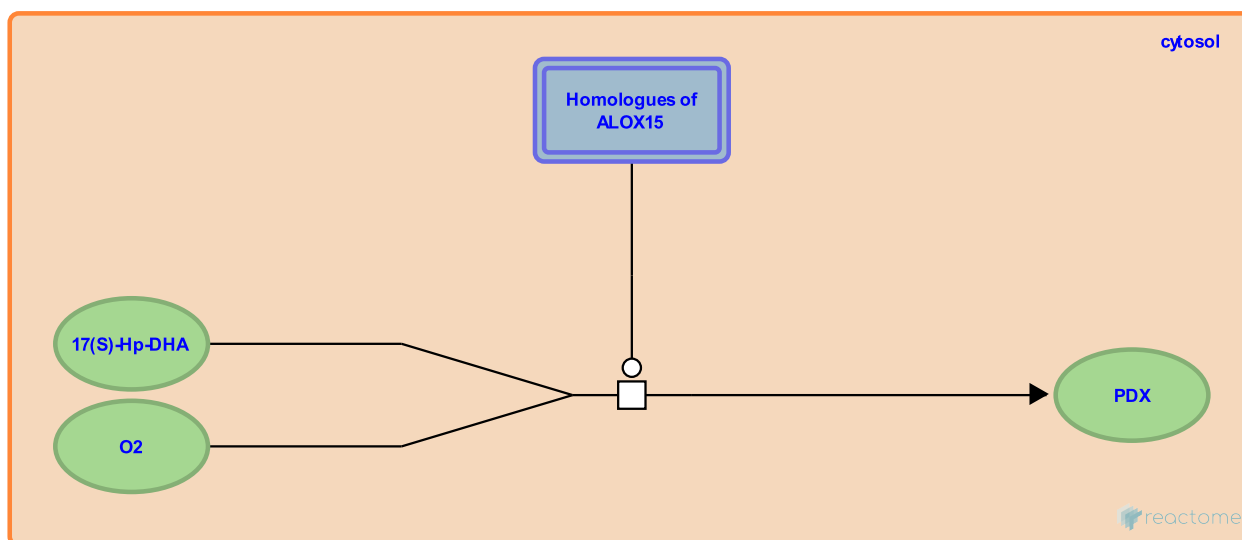
**Location:** [Biosynthesis of protectins](#)

**Stable identifier:** R-DDI-9024872

**Type:** transition

**Compartments:** cytosol

**Inferred from:** [ALOX15 oxidises 17\(S\)-Hp-DHA to PDX \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](#) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

## LTA4H:Zn<sup>2+</sup> hydrolyses 16S,17S-epoxy-DHA to (N)PD1 ↗

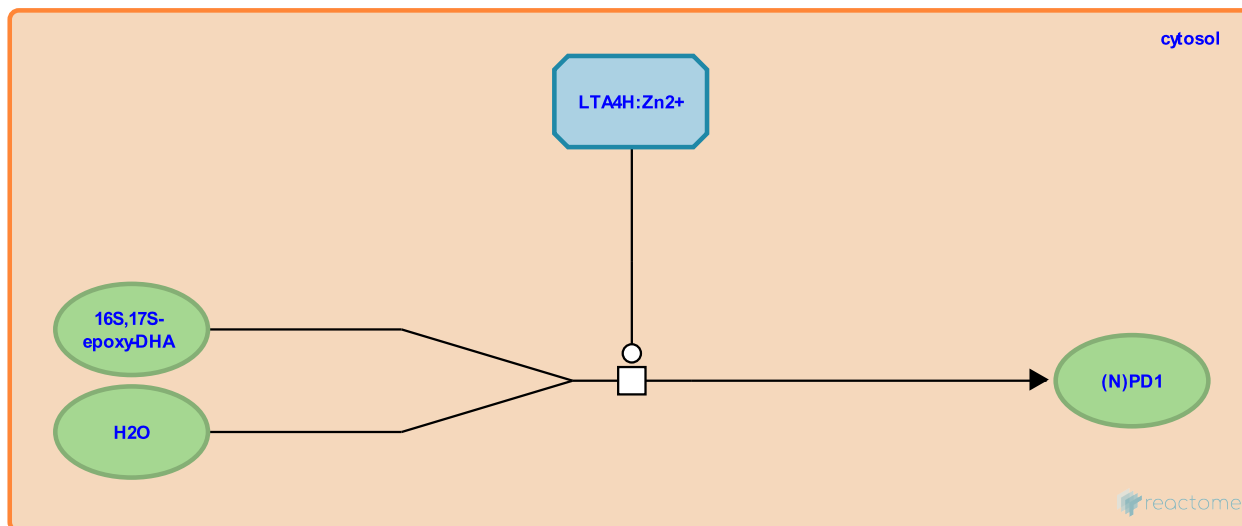
**Location:** [Biosynthesis of protectins](#)

**Stable identifier:** R-DDI-9024890

**Type:** transition

**Compartments:** cytosol

**Inferred from:** [LTA4H:Zn<sup>2+</sup> hydrolyses 16S,17S-epoxy-DHA to \(N\)PD1 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](#) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

## ALOX15 dehydrogenates 17(R)-Hp-DHA to 17R(16)-epoxy-DHA ↗

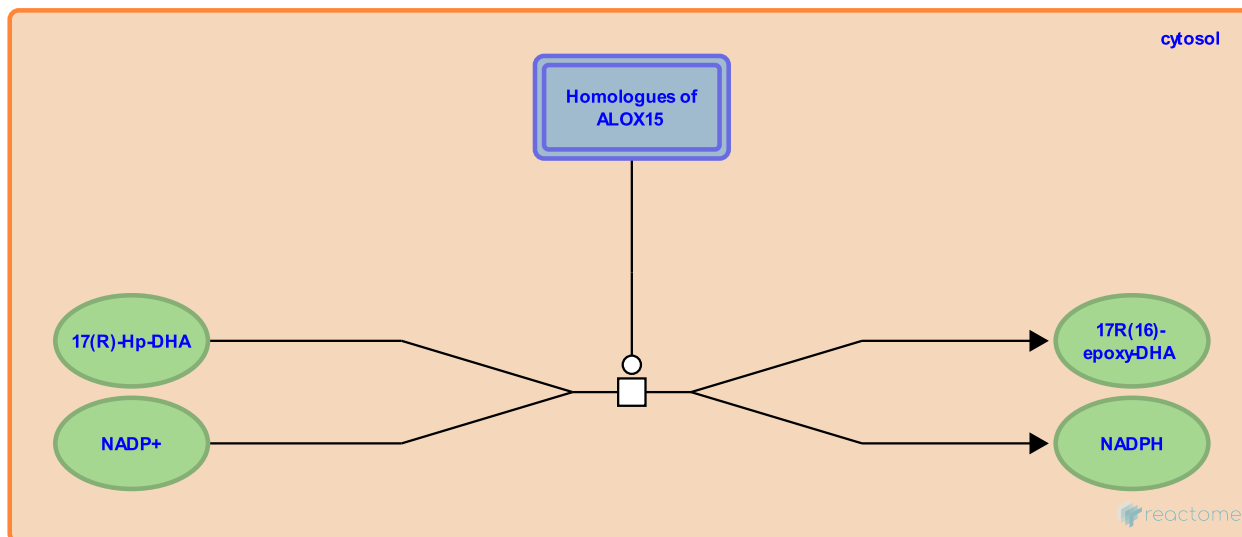
**Location:** [Biosynthesis of protectins](#)

**Stable identifier:** R-DDI-9020262

**Type:** transition

**Compartments:** cytosol

**Inferred from:** [ALOX15 dehydrogenates 17\(R\)-Hp-DHA to 17R\(16\)-epoxy-DHA \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](#) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

**Followed by:** [LTA4H:Zn<sup>2+</sup> hydrolyses 17R\(16\)-epoxy-DHA to AT-\(N\)PD1](#)

## LTA4H:Zn<sup>2+</sup> hydrolyses 17R(16)-epoxy-DHA to AT-(N)PD1 ↗

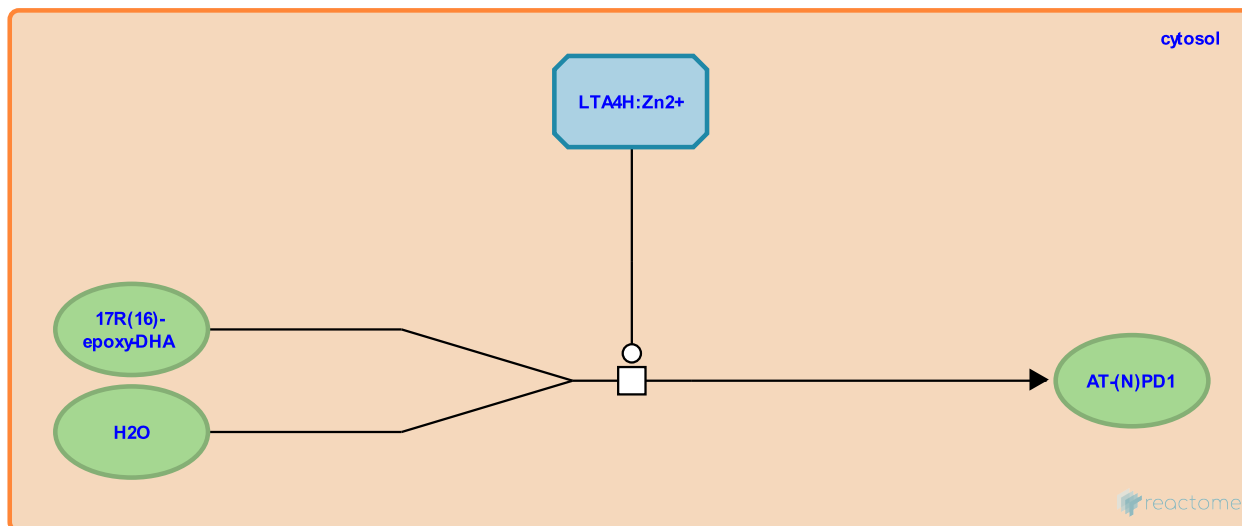
**Location:** [Biosynthesis of protectins](#)

**Stable identifier:** R-DDI-9020257

**Type:** transition

**Compartments:** cytosol

**Inferred from:** [LTA4H:Zn<sup>2+</sup> hydrolyses 17R\(16\)-epoxy-DHA to AT-\(N\)PD1 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](#) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

**Preceded by:** [ALOX15 dehydrogenates 17\(R\)-Hp-DHA to 17R\(16\)-epoxy-DHA](#)

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