Cholesterol biosynthesis via lathosterol

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.

02/06/2024

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

Fabregat, A., Sidiropoulos, K., Viteri, G., Forner, O., Marin-Garcia, P., Arnau, V. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics, 18*, 142. ↗

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

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. ↗

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

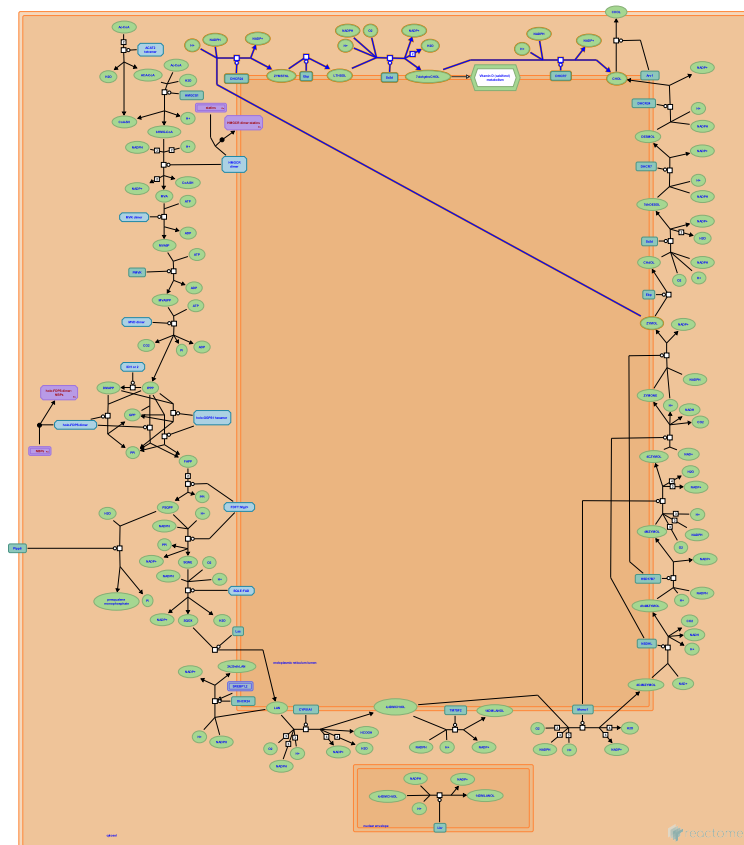This document contains 1 pathway and 4 reactions (see Table of Contents)

Cholesterol biosynthesis via lathosterol ↗

Stable identifier: R-MMU-6807062

Compartments: endoplasmic reticulum membrane, cytosol

Inferred from: Cholesterol biosynthesis via lathosterol (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
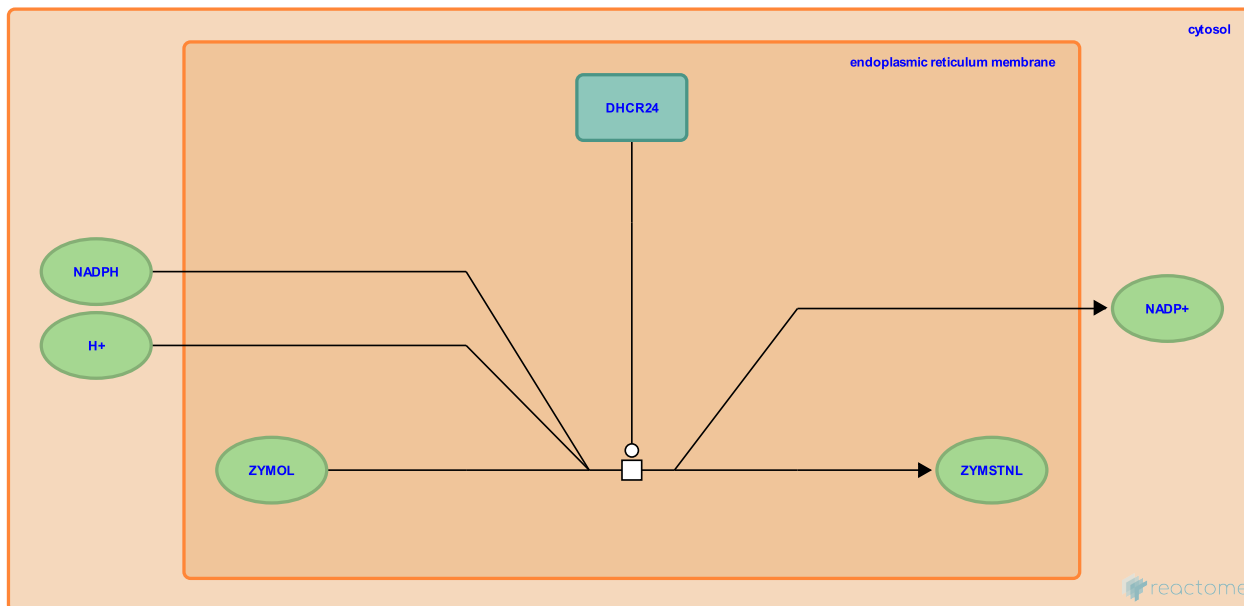
DHCR24 reduces ZYMOL to ZYMSTNL ↗

Location: Cholesterol biosynthesis via lathosterol

Stable identifier: R-MMU-6807064

Type: transition

Compartments: endoplasmic reticulum membrane, cytosol

Inferred from: DHCR24 reduces ZYMOL to ZYMSTNL (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: EBP isomerizes ZYMSTNL to LTHSOL

EBP isomerizes ZYMSTNL to LTHSOL ↗

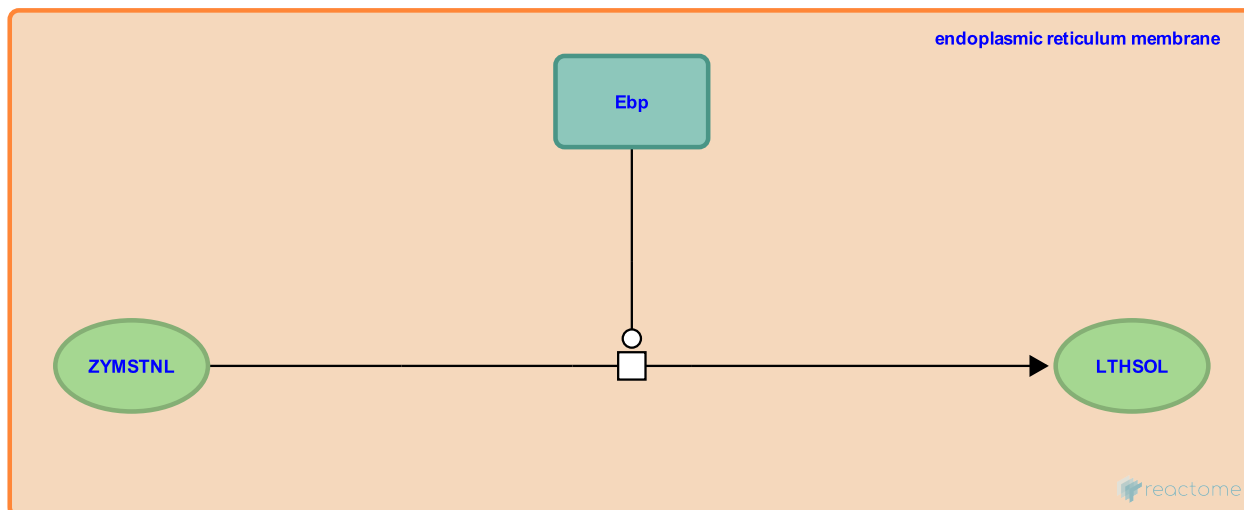**Location:** Cholesterol biosynthesis via lathosterol

Stable identifier: R-MMU-6807052

Type: transition

Compartments: endoplasmic reticulum membrane

Inferred from: EBP isomerizes ZYMSTNL to LTHSOL (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: DHCR24 reduces ZYMOL to ZYMSTNL

Followed by: SC5D desaturates LTHSOL to 7-dehydroCHOL
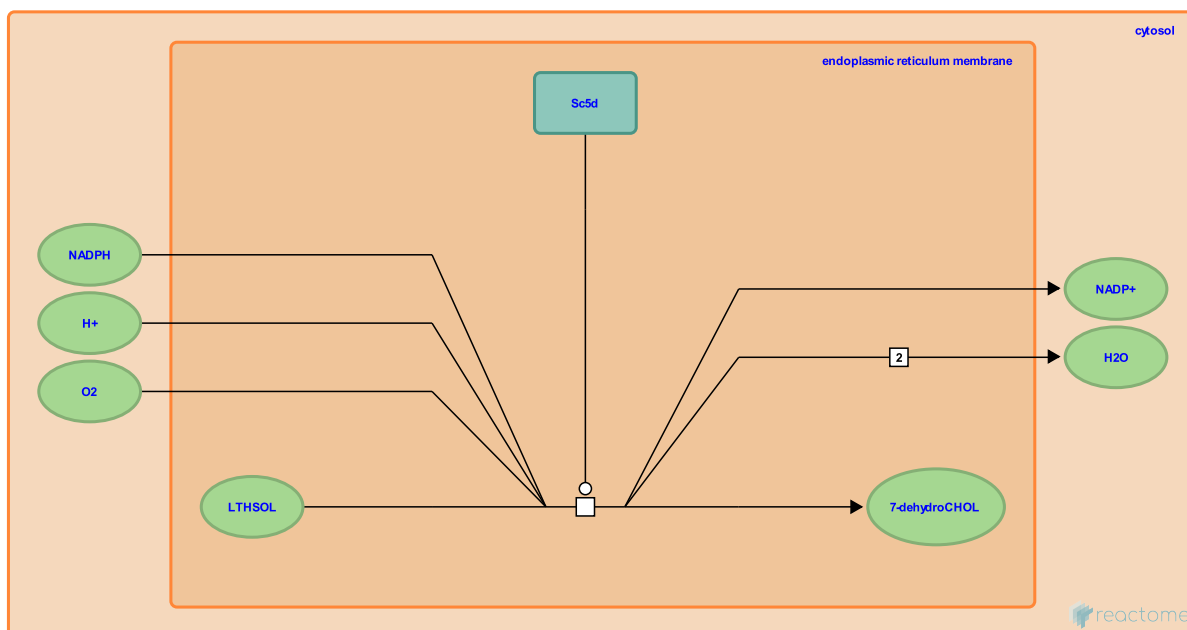
SC5D desaturates LTHSOL to 7-dehydroCHOL ↗

Location: Cholesterol biosynthesis via lathosterol

Stable identifier: R-MMU-6807053

Type: transition

Compartments: endoplasmic reticulum membrane, cytosol

Inferred from: SC5D desaturates LTHSOL to 7-dehydroCHOL (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: EBP isomerizes ZYMSTNL to LTHSOL

Followed by: DHCR7 reduces 7-dehydroCHOL to CHOL
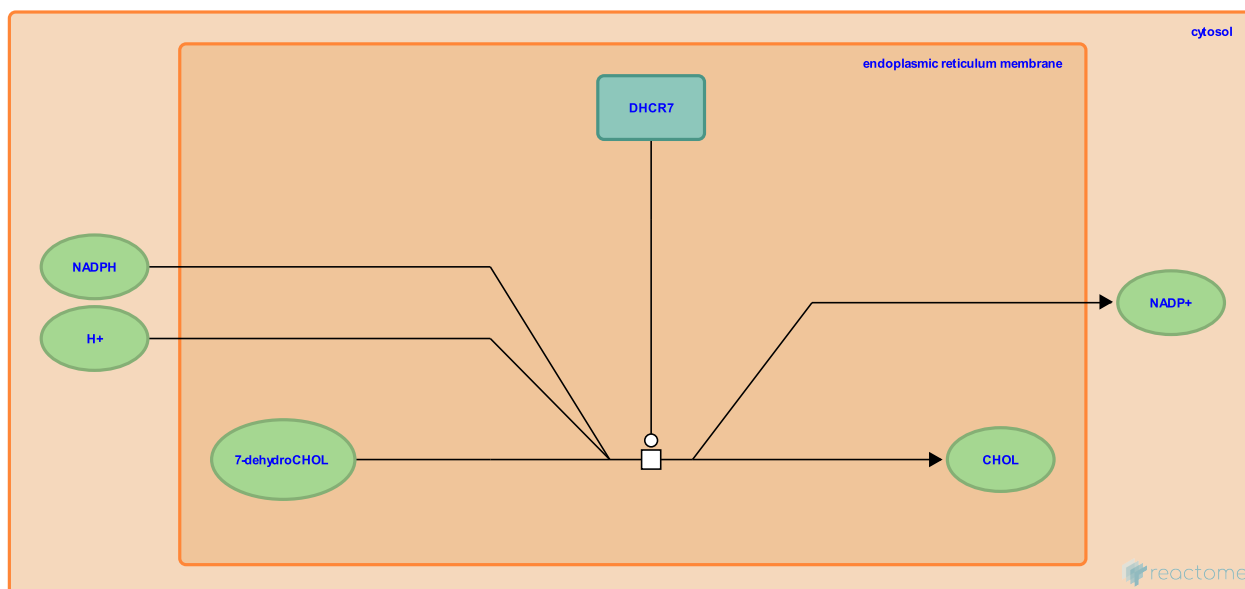
DHCR7 reduces 7-dehydroCHOL to CHOL ↗

Location: Cholesterol biosynthesis via lathosterol

Stable identifier: R-MMU-6807055

Type: transition

Compartments: endoplasmic reticulum membrane, cytosol

Inferred from: DHCR7 reduces 7-dehydroCHOL to CHOL (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: SC5D desaturates LTHSOL to 7-dehydroCHOL

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