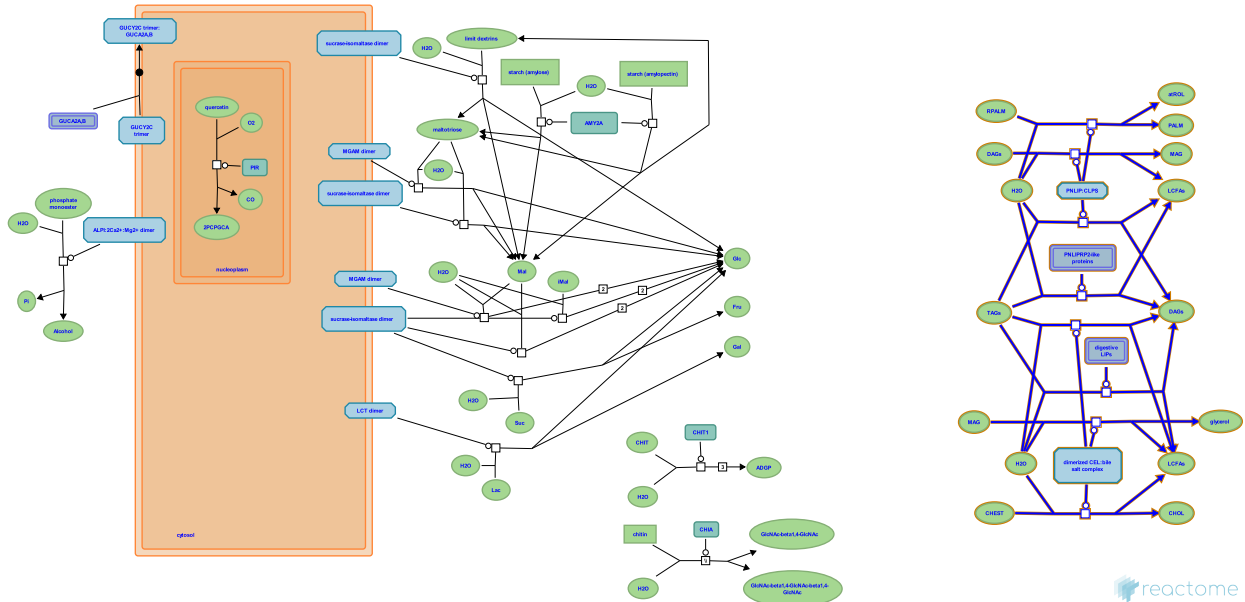


Digestion of dietary lipid



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](https://reactome.org/Textbook/).

07/05/2024

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

- 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

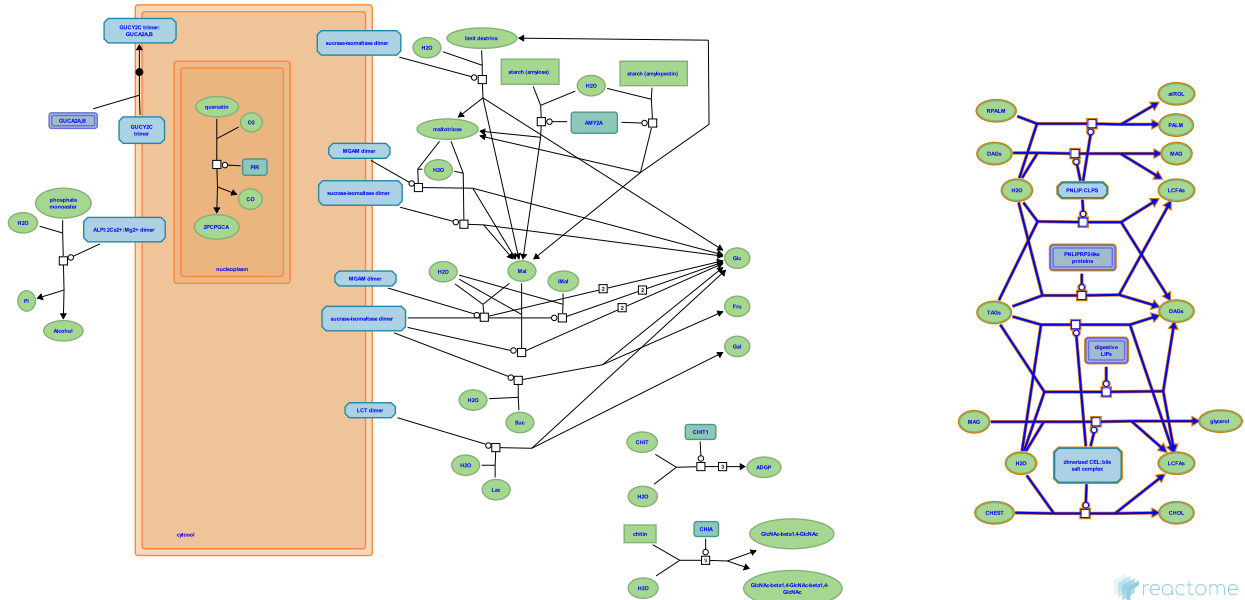
This document contains 1 pathway and 8 reactions ([see Table of Contents](#))

Digestion of dietary lipid ↗

Stable identifier: R-MMU-192456

Compartments: extracellular region

Inferred from: Digestion of dietary lipid (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.reactome.org) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

Digestion of cholesterol esters by extracellular CEL (bile salt-dependent lipase) ↗

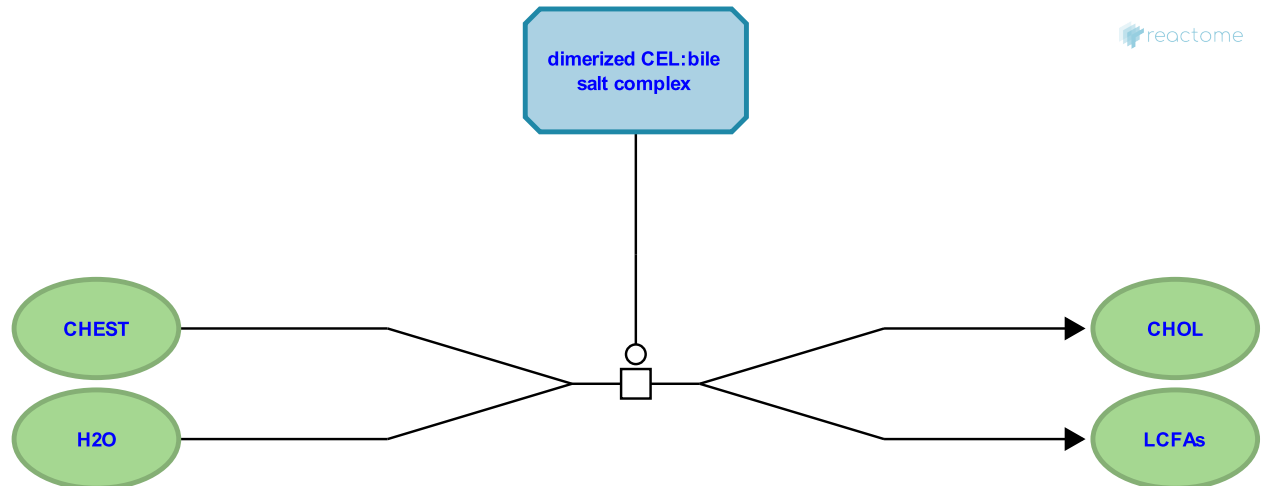
Location: Digestion of dietary lipid

Stable identifier: R-MMU-192417

Type: transition

Compartments: extracellular region

Inferred from: Digestion of cholesterol esters by extracellular CEL (bile salt-dependent lipase) (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>

Digestion of monoacylglycerols by extracellular CEL (bile salt-dependent lipase) ↗

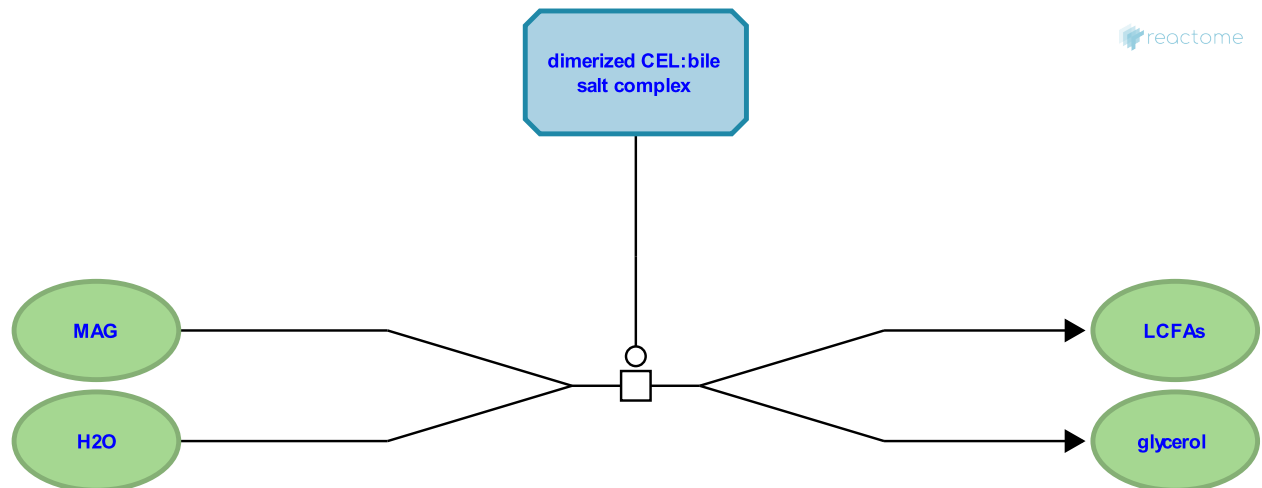
Location: [Digestion of dietary lipid](#)

Stable identifier: R-MMU-192425

Type: transition

Compartments: extracellular region

Inferred from: [Digestion of monoacylglycerols by extracellular CEL \(bile salt-dependent lipase\) \(Homo sapiens\)](#)



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: [Digestion of diacylglycerols by extracellular PTL:colipase](#)

Digestion of triacylglycerols by extracellular CEL (bile salt-dependent lipase) ↗

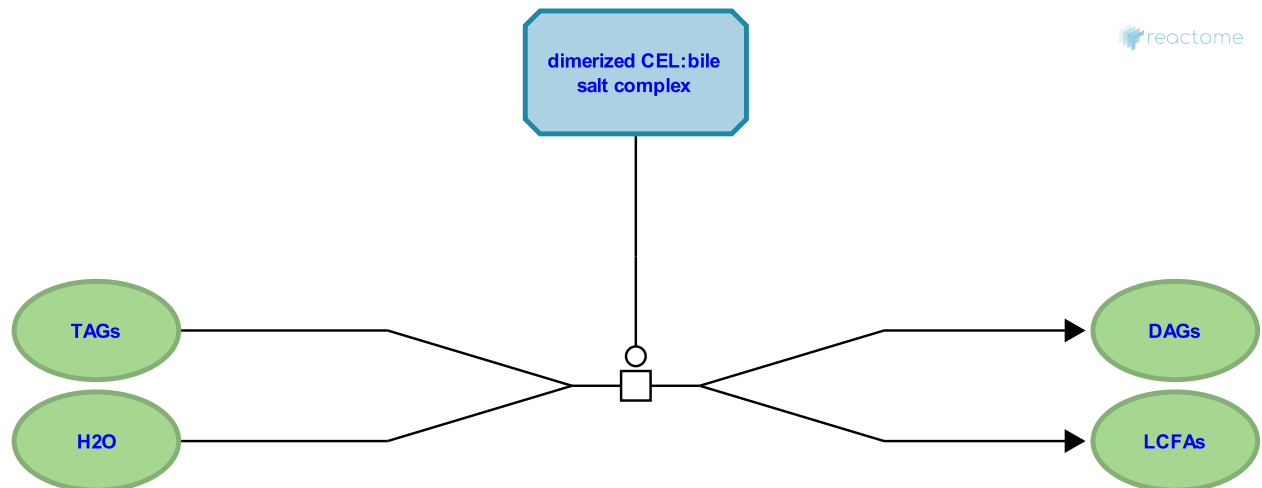
Location: [Digestion of dietary lipid](#)

Stable identifier: R-MMU-192430

Type: transition

Compartments: extracellular region

Inferred from: [Digestion of triacylglycerols by extracellular CEL \(bile salt-dependent lipase\) \(Homo sapiens\)](#)



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: [Digestion of diacylglycerols by extracellular PTL:colipase](#)

Digestion of triacylglycerols by extracellular PTL:colipase ↗

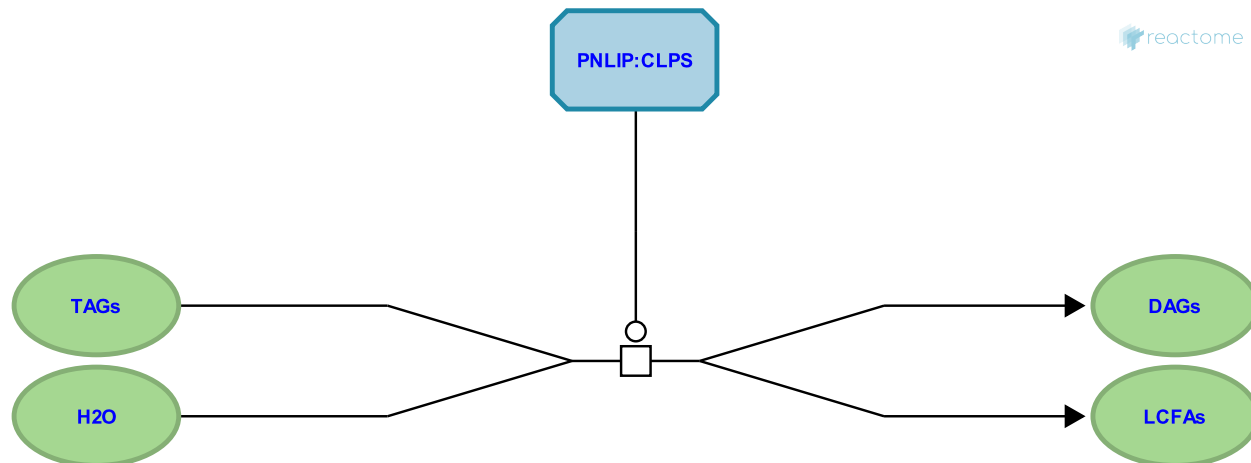
Location: [Digestion of dietary lipid](#)

Stable identifier: R-MMU-192422

Type: transition

Compartments: extracellular region

Inferred from: [Digestion of triacylglycerols by extracellular PTL:colipase \(Homo sapiens\)](#)



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: [Digestion of diacylglycerols by extracellular PTL:colipase](#)

Digestion of diacylglycerols by extracellular PTL:colipase ↗

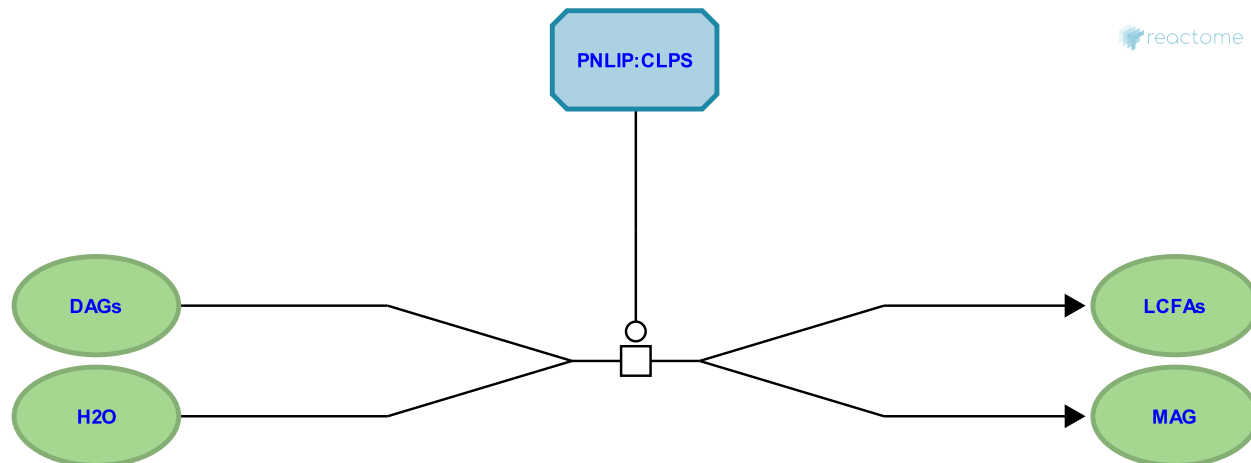
Location: [Digestion of dietary lipid](#)

Stable identifier: R-MMU-192434

Type: transition

Compartments: extracellular region

Inferred from: [Digestion of diacylglycerols by extracellular PTL:colipase \(Homo sapiens\)](#)



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: [Digestion of triacylglycerols by extracellular CEL \(bile salt-dependent lipase\)](#), [Digestion of triacylglycerols by extracellular PTL:colipase](#)

Followed by: [Digestion of monoacylglycerols by extracellular CEL \(bile salt-dependent lipase\)](#)

Digestion of triacylglycerols by extracellular pancreatic lipase-related protein 2 [↗](#)

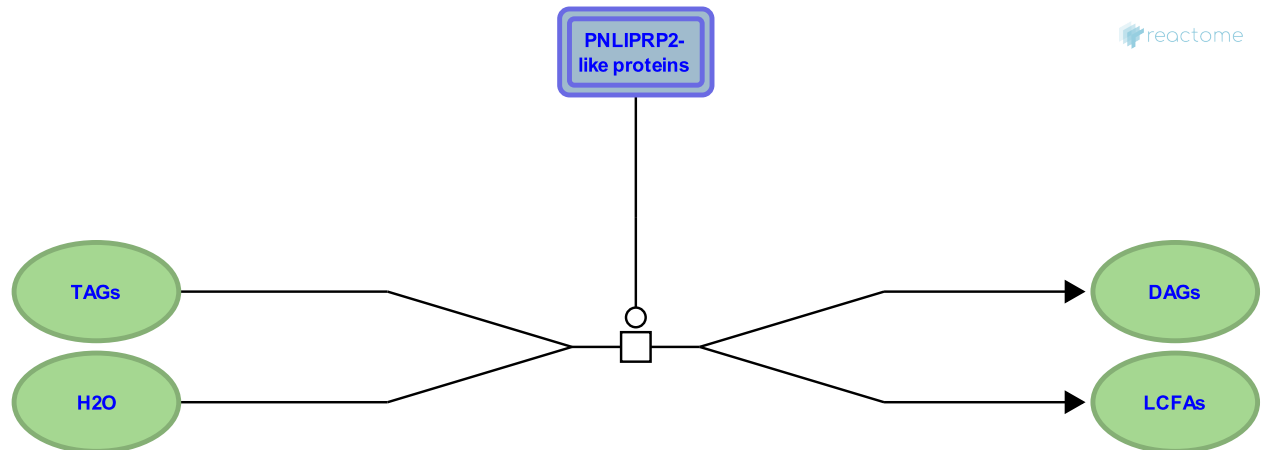
Location: [Digestion of dietary lipid](#)

Stable identifier: R-MMU-192475

Type: transition

Compartments: extracellular region

Inferred from: [Digestion of triacylglycerols by extracellular pancreatic lipase-related protein 2 \(Homo sapiens\)](#)



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>

PNLIP:CLPS hydrolyses RPALM to atROL and PALM ↗

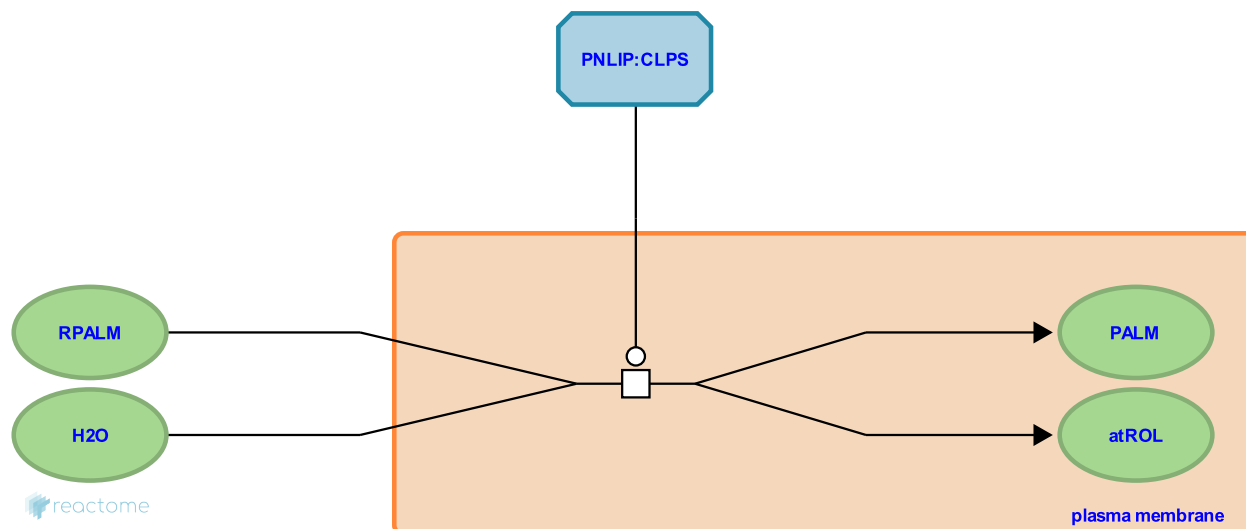
Location: Digestion of dietary lipid

Stable identifier: R-MMU-975593

Type: transition

Compartments: plasma membrane, extracellular region

Inferred from: PNLIP:CLPS hydrolyses RPALM to atROL and PALM (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>

LIPs hydrolyze TG to DAG and LCFA ↗

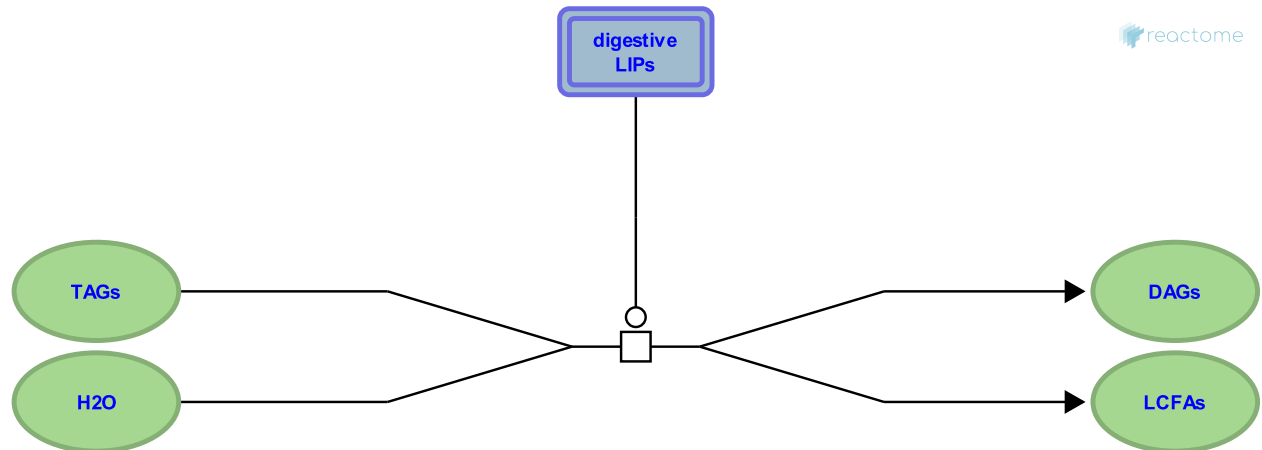
Location: Digestion of dietary lipid

Stable identifier: R-MMU-8979996

Type: transition

Compartments: extracellular region

Inferred from: LIPs hydrolyze TG to DAG and LCFA (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.](https://www.reactome.org) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

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