Platelet sensitization by LDL

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.

15/05/2024

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.

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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

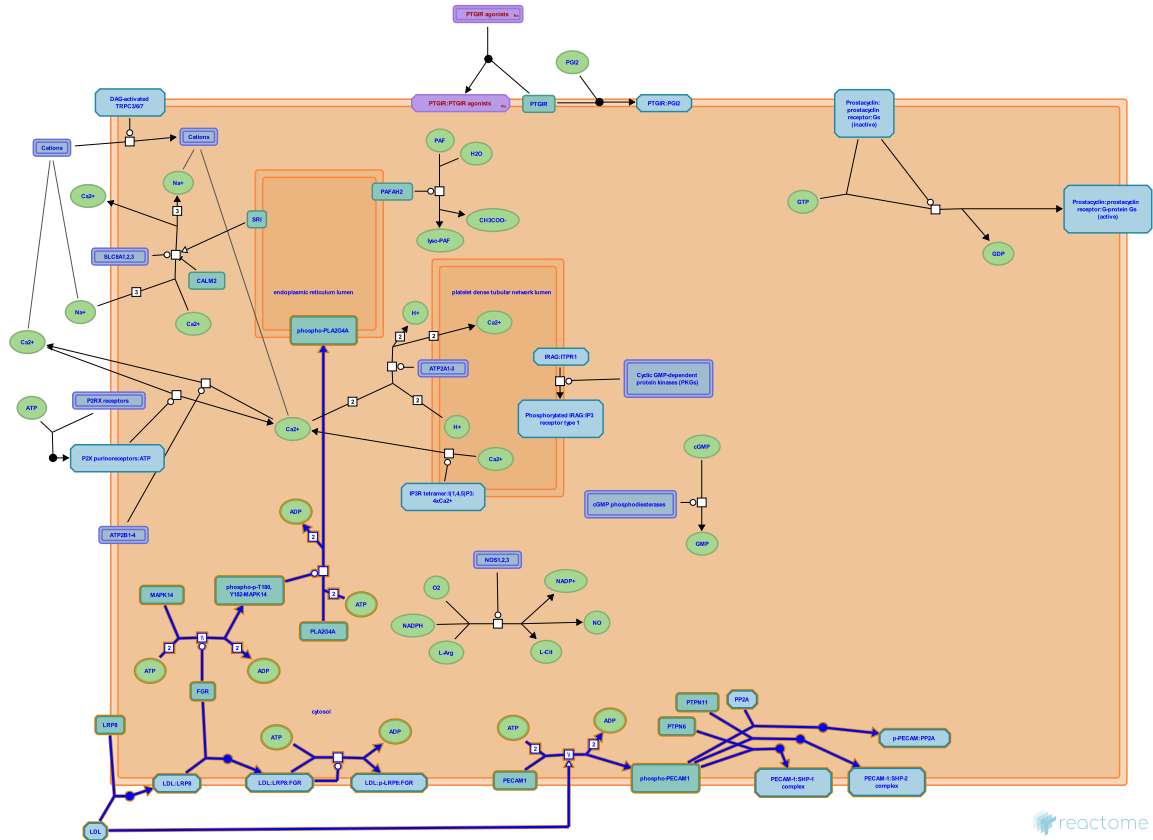This document contains 1 pathway and 9 reactions (see Table of Contents)

Platelet sensitization by LDL ↗

Stable identifier: R-CFA-432142

Compartments: plasma membrane

Inferred from: Platelet sensitization by LDL (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
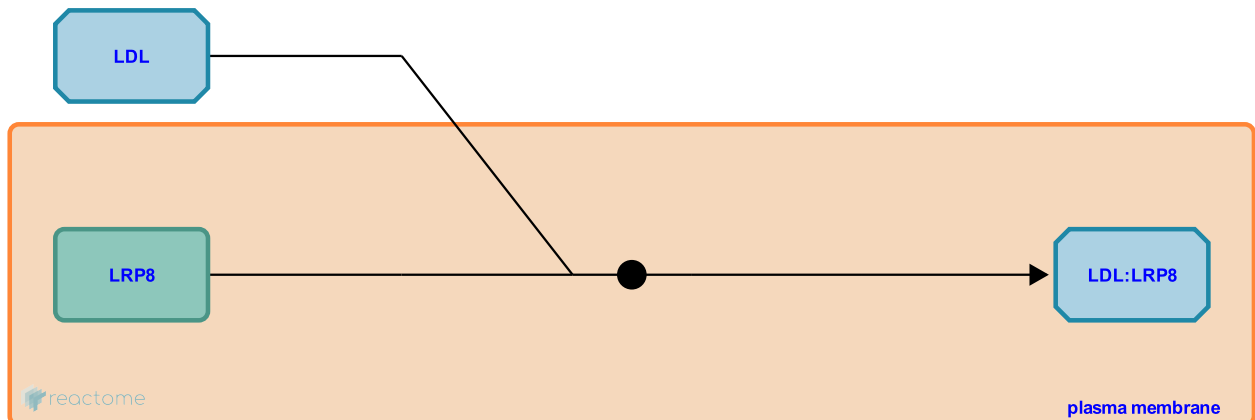
LDL binds to LRP8 ↗

Location: Platelet sensitization by LDL

Stable identifier: R-CFA-432121

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: LDL binds to LRP8 (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.

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Followed by: FGR binds LDL:LRP8
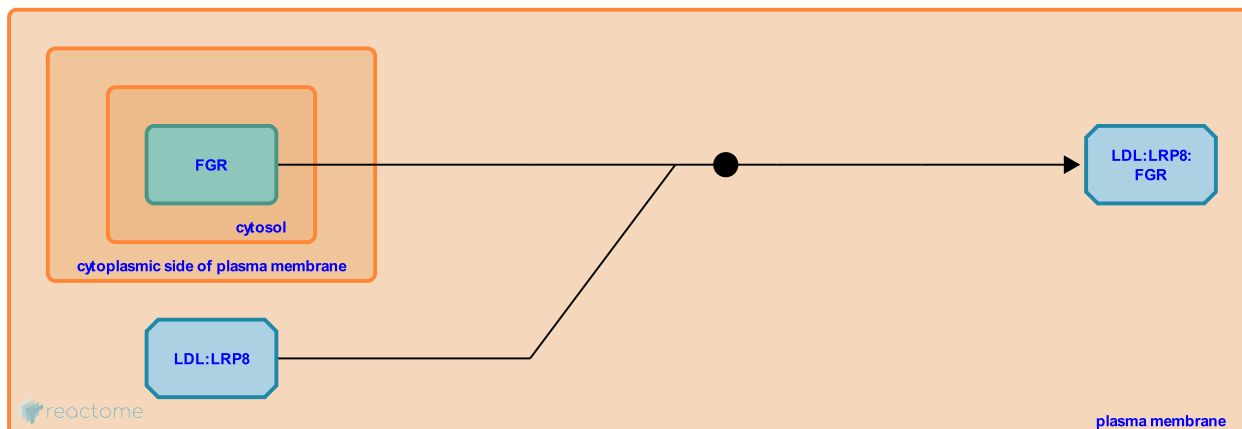
FGR binds LDL:LRP8 ↗

Location: Platelet sensitization by LDL

Stable identifier: R-CFA-8948034

Type: binding

Compartments: plasma membrane, cytosol

Inferred from: FGR binds LDL:LRP8 (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: LDL binds to LRP8

Followed by: FGR binds and phosphorylates LRP8
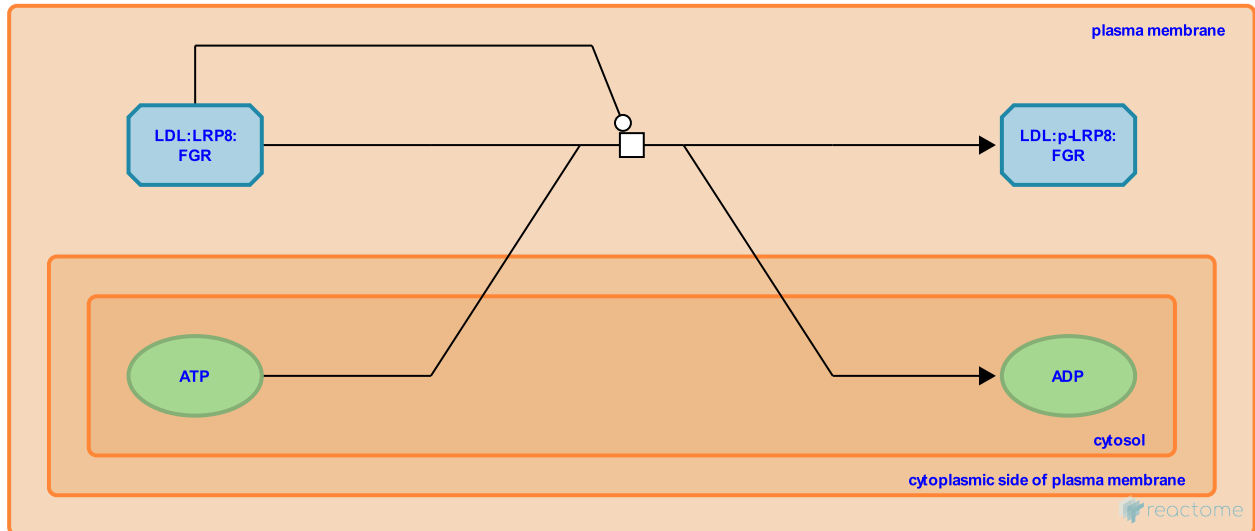
FGR binds and phosphorylates LRP8 ↗

Location: Platelet sensitization by LDL

Stable identifier: R-CFA-432129

Type: transition

Compartments: plasma membrane, cytosol

Inferred from: FGR binds and phosphorylates LRP8 (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: FGR binds LDL:LRP8

Followed by: Fgr may phosphorylate p38 MAPK

Fgr may phosphorylate p38 MAPK ↗
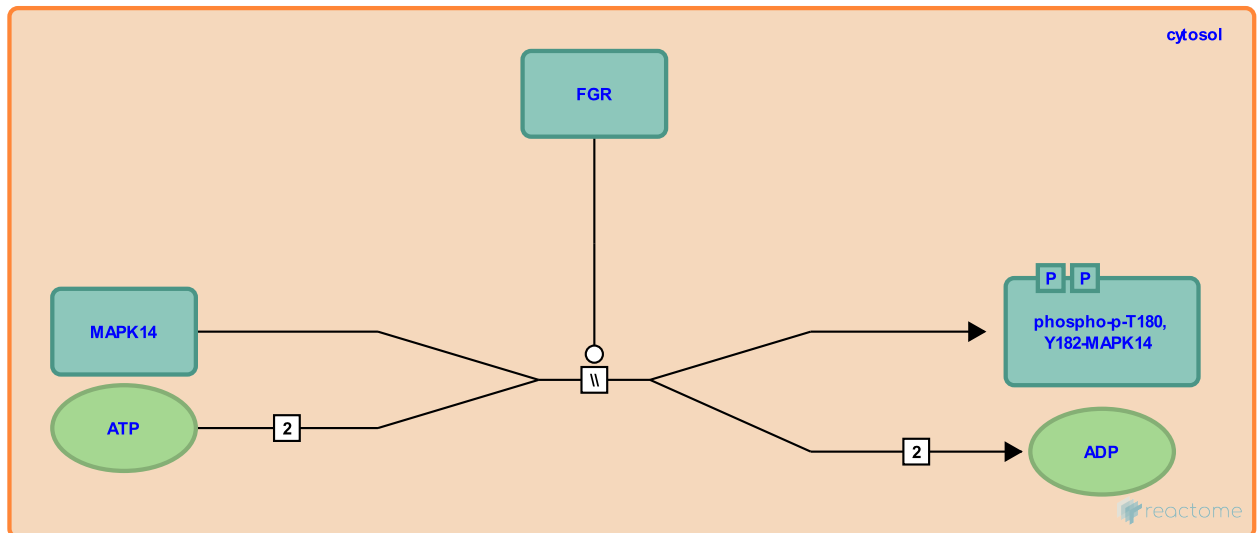
Location: Platelet sensitization by LDL

Stable identifier: R-CFA-432148

Type: omitted

Compartments: cytosol

Inferred from: Fgr may phosphorylate p38 MAPK (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: FGR binds and phosphorylates LRP8

Followed by: Phosphorylation of cPLA2 by MAPK p38 alpha
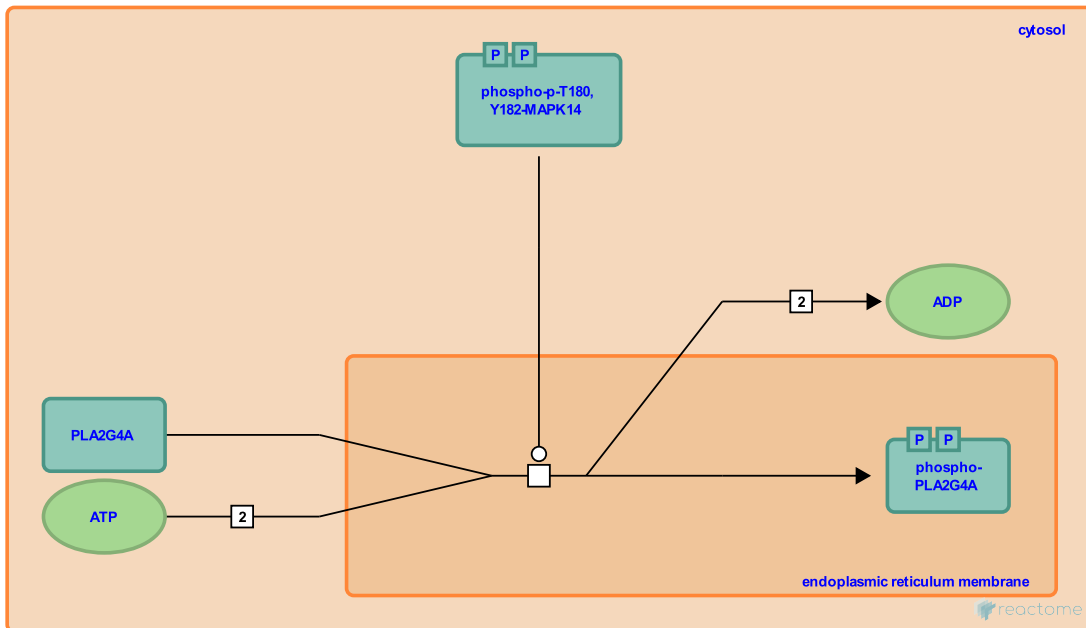
Phosphorylation of cPLA2 by MAPK p38 alpha ↗

Location: Platelet sensitization by LDL

Stable identifier: R-CFA-428961

Type: transition

Compartments: endoplasmic reticulum membrane, cytosol

Inferred from: Phosphorylation of cPLA2 by MAPK p38 alpha (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.

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Preceded by: Fgr may phosphorylate p38 MAPK

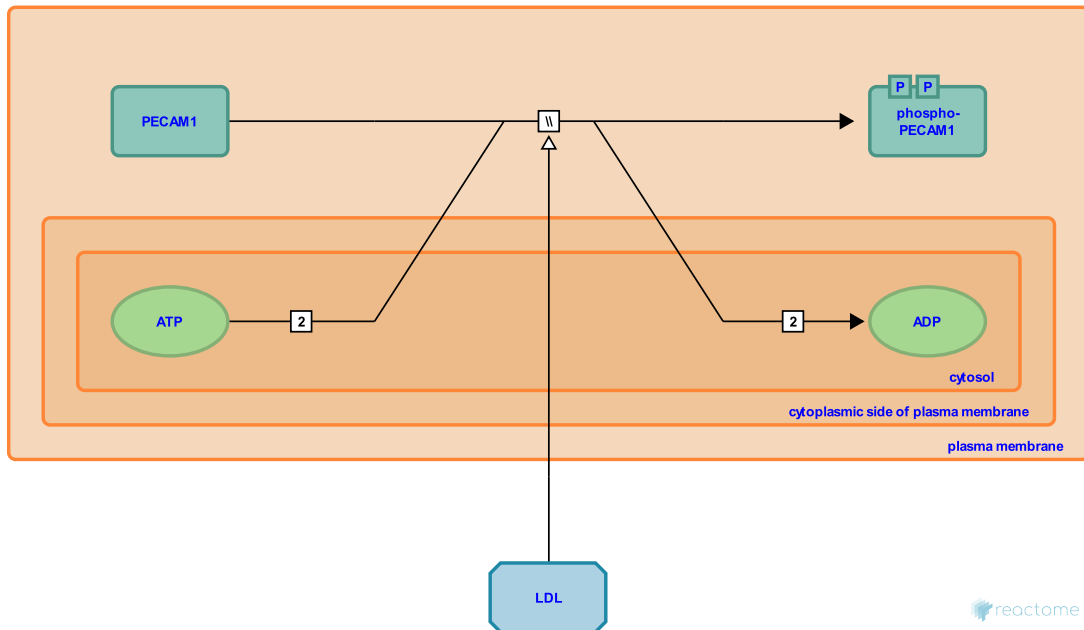# PECAM1 is phosphorylated ↗

Location: Platelet sensitization by LDL

Stable identifier: R-CFA-435244

Type: omitted

Compartments: plasma membrane, extracellular region

Inferred from: PECAM1 is phosphorylated (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: PECAM-1 binds PP2A, Interaction of PECAM-1 and SHP-1, Interaction of PECAM-1 and SHP-2
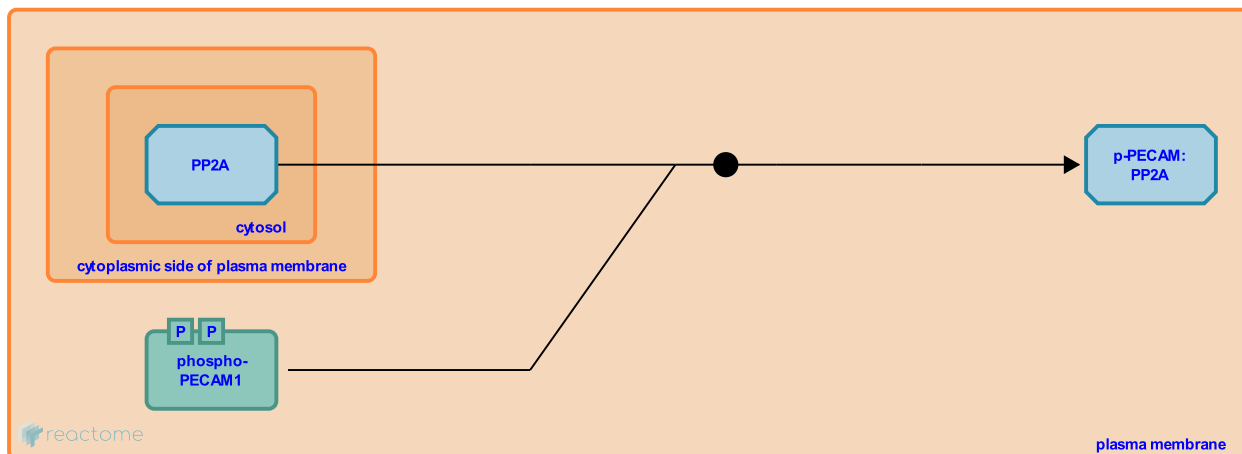
PECAM-1 binds PP2A ↗

Location: Platelet sensitization by LDL

Stable identifier: R-CFA-432143

Type: binding

Compartments: plasma membrane, cytosol

Inferred from: PECAM-1 binds PP2A (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: PECAM1 is phosphorylated

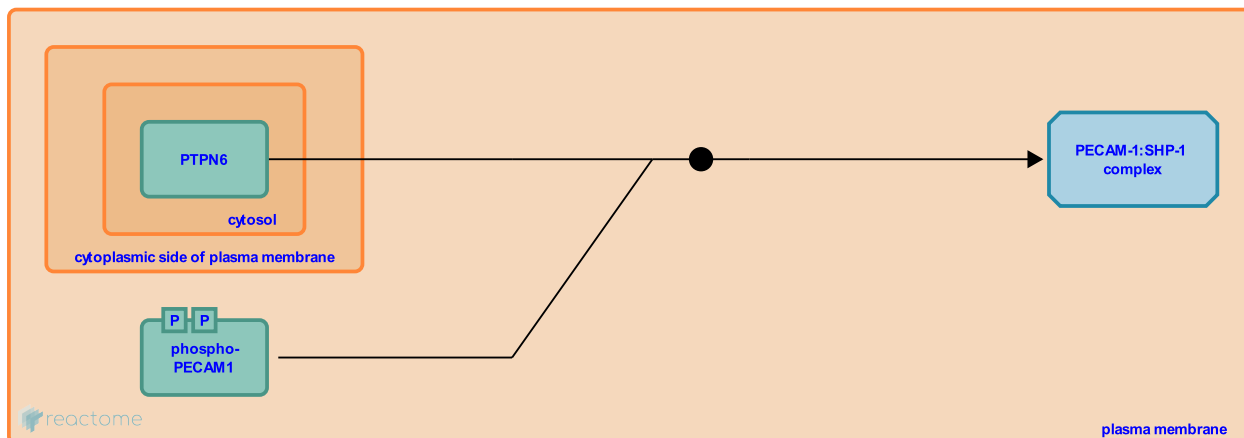## Interaction of PECAM-1 and SHP-1 ↗

Location: Platelet sensitization by LDL

Stable identifier: R-CFA-210277

Type: binding

Compartments: plasma membrane, cytosol

Inferred from: Interaction of PECAM-1 and SHP-1 (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: PECAM1 is phosphorylated

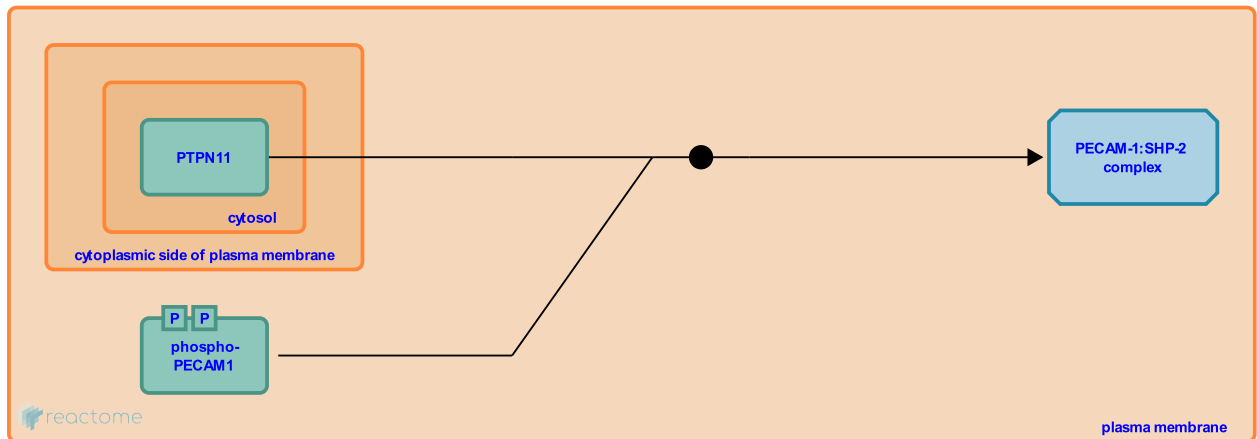## Interaction of PECAM-1 and SHP-2 ↗

Location: Platelet sensitization by LDL

Stable identifier: R-CFA-210294

Type: binding

Compartments: plasma membrane, cytosol

Inferred from: Interaction of PECAM-1 and SHP-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

Preceded by: PECAM1 is phosphorylated

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