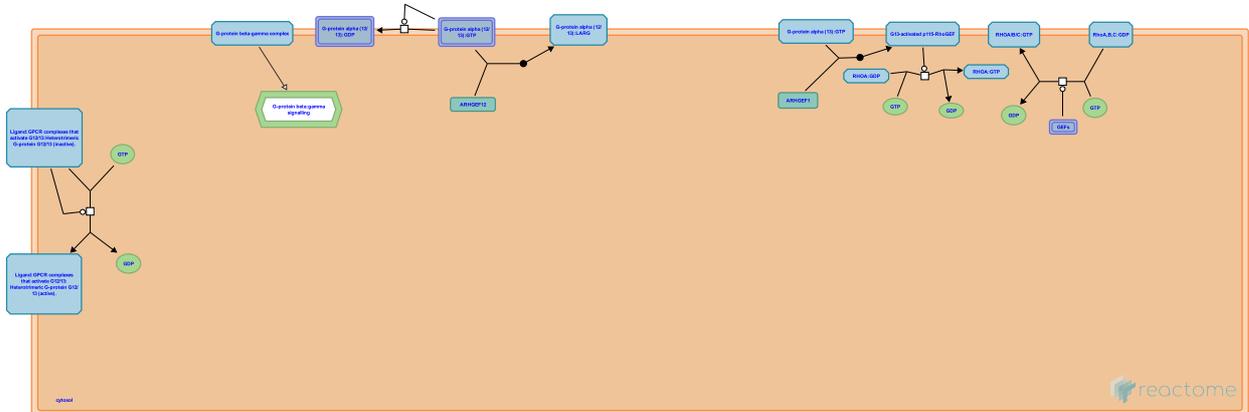


G alpha (12/13) signalling events



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

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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

- 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. [↗](#)
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Reactome database release: 75

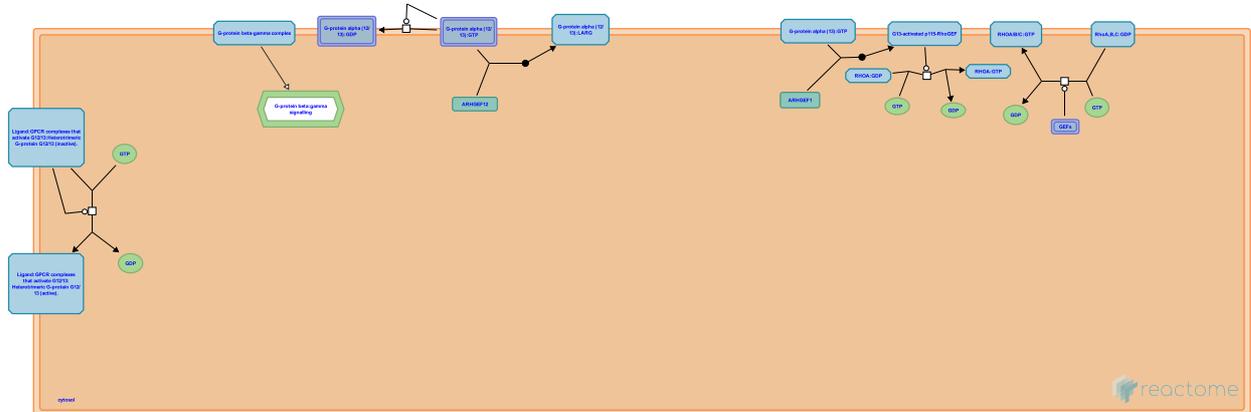
This document contains 1 pathway and 6 reactions ([see Table of Contents](#))

G alpha (12/13) signalling events ↗

Stable identifier: R-BTA-416482

Compartments: cytoplasmic side of plasma membrane

Inferred from: G alpha (12/13) signalling events (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.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

Liganded G12/13-activating GPCR acts as a GEF for G12/13 ↗

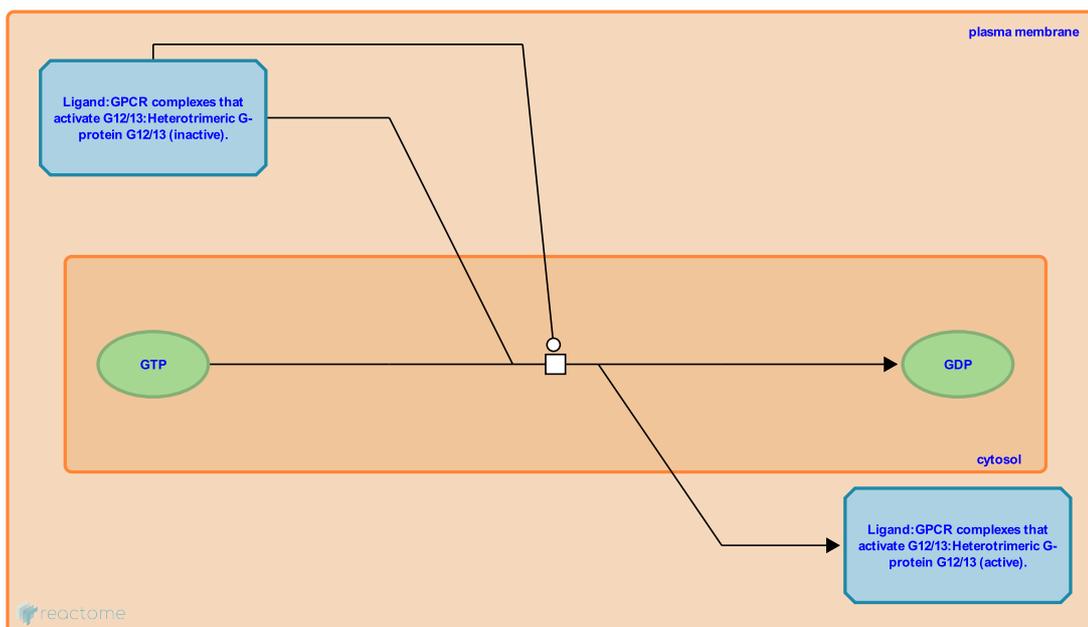
Location: G alpha (12/13) signalling events

Stable identifier: R-BTA-751029

Type: transition

Compartments: cytosol, plasma membrane

Inferred from: Liganded G12/13-activating GPCR acts as a GEF for G12/13 (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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G alpha (13) activates Rho guanine nucleotide exchange factor 1 (p115-RhoGEF) ↗

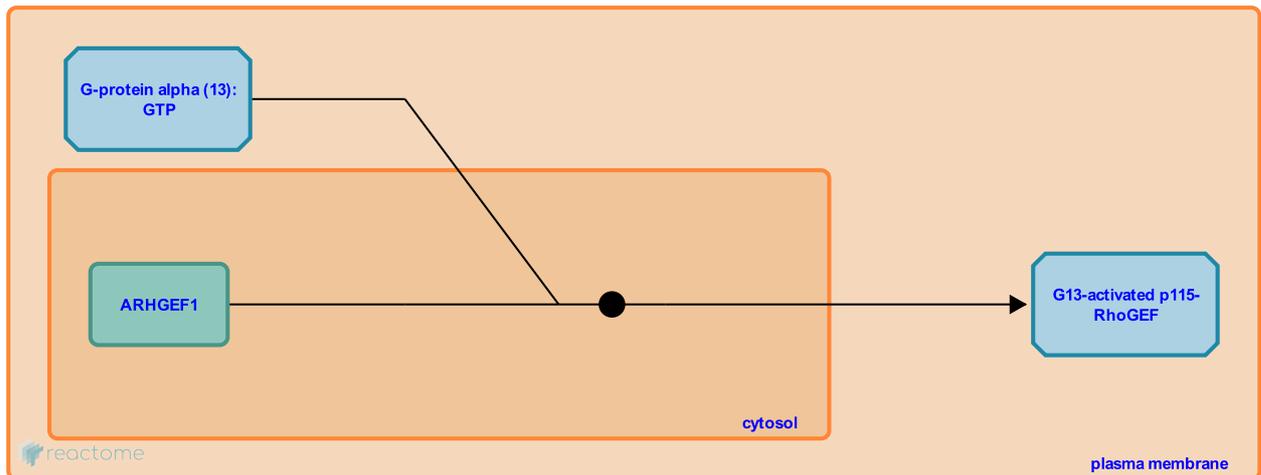
Location: [G alpha \(12/13\) signalling events](#)

Stable identifier: R-BTA-114548

Type: binding

Compartments: cytosol, plasma membrane

Inferred from: [G alpha \(13\) activates Rho guanine nucleotide exchange factor 1 \(p115-RhoGEF\) \(Homo sapiens\)](#)



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.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

Followed by: [p115-RhoGEF activation of RHOA](#), [GEFs activate RhoA,B,C](#)

p115-RhoGEF activation of RHOA ↗

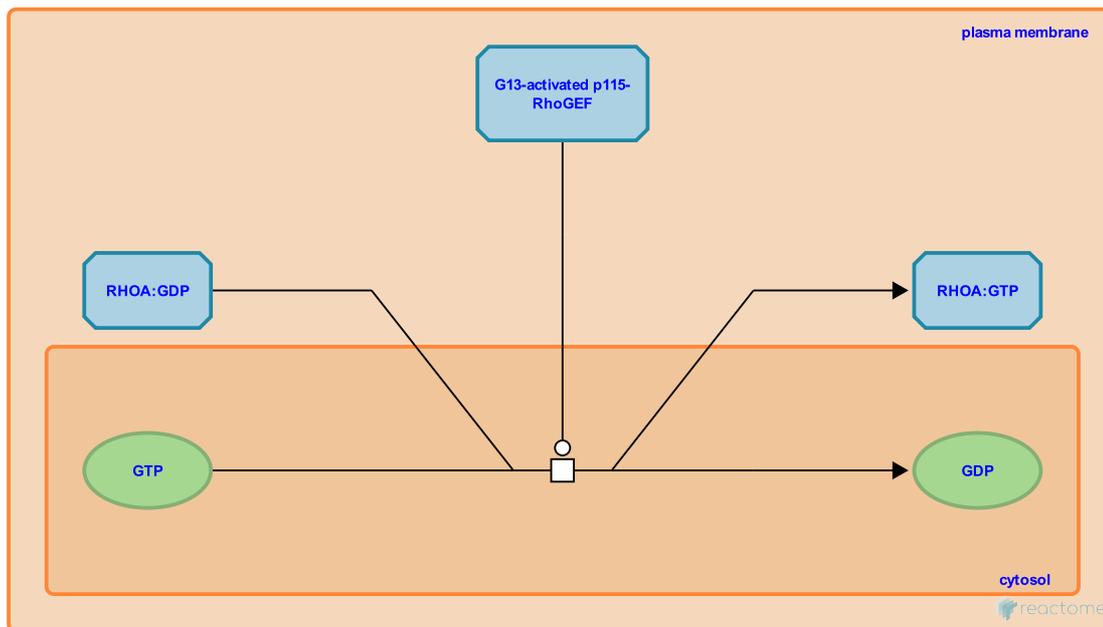
Location: G alpha (12/13) signalling events

Stable identifier: R-BTA-114544

Type: transition

Compartments: cytosol, plasma membrane

Inferred from: p115-RhoGEF activation of RHOA (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.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

Preceded by: G alpha (13) activates Rho guanine nucleotide exchange factor 1 (p115-RhoGEF)

GEFs activate RhoA,B,C ↗

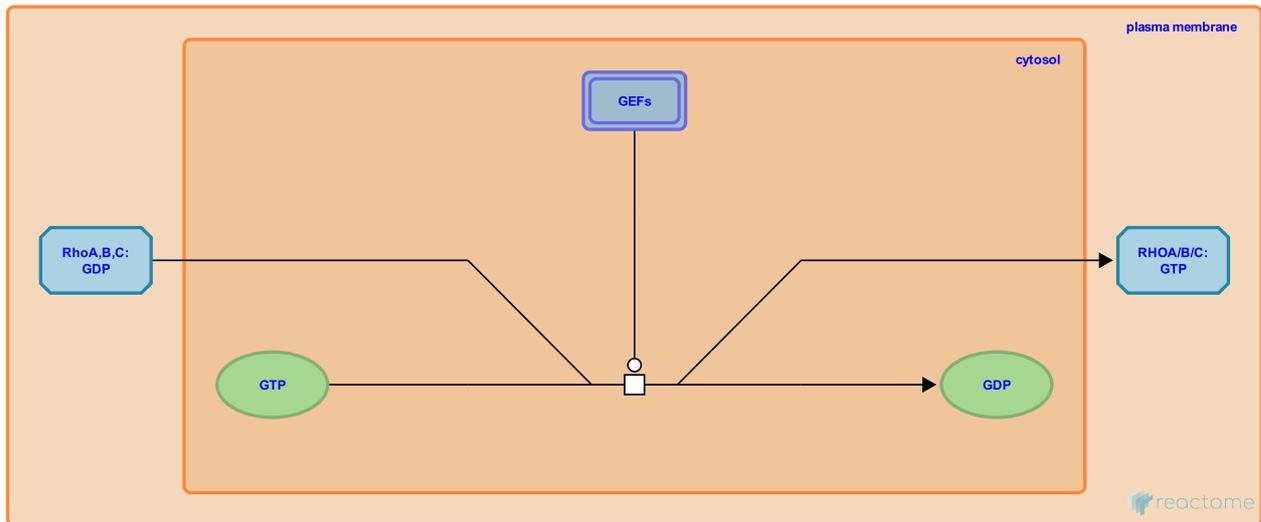
Location: [G alpha \(12/13\) signalling events](#)

Stable identifier: R-BTA-419166

Type: transition

Compartments: cytosol, plasma membrane

Inferred from: [GEFs activate RhoA,B,C \(Homo sapiens\)](#)



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.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

Preceded by: [G alpha \(13\) activates Rho guanine nucleotide exchange factor 1 \(p115-RhoGEF\)](#), [LARG activation by G alpha 12/13](#)

LARG activation by G alpha 12/13 ↗

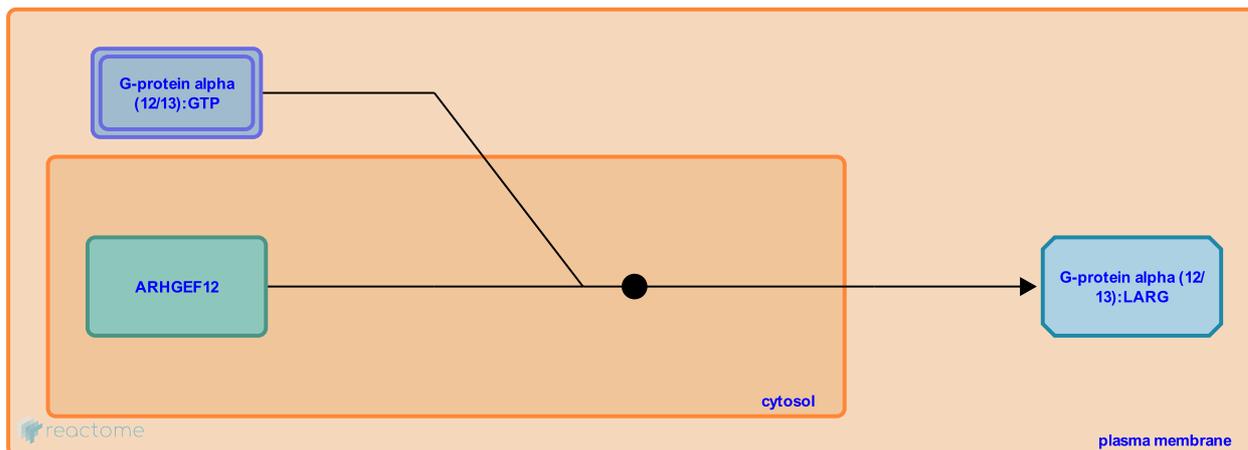
Location: [G alpha \(12/13\) signalling events](#)

Stable identifier: R-BTA-398184

Type: binding

Compartments: cytosol, plasma membrane

Inferred from: [LARG activation by G alpha 12/13 \(Homo sapiens\)](#)



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.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

Followed by: [GEFs activate RhoA,B,C](#)

G alpha (12/13) auto-inactivates by hydrolysing GTP to GDP ↗

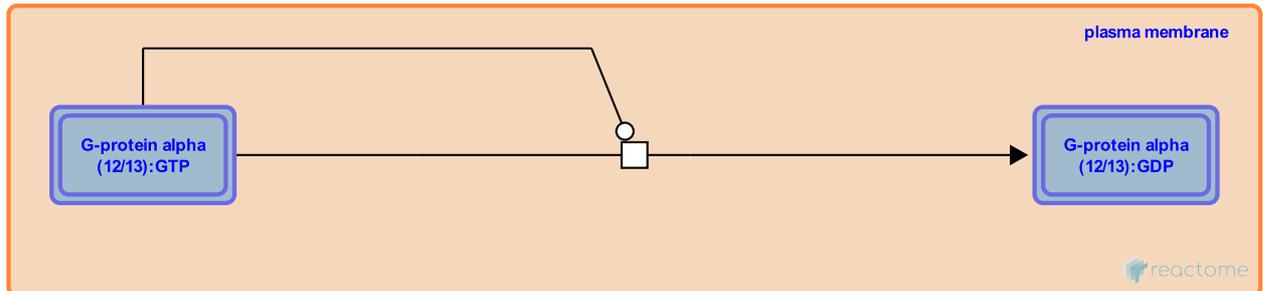
Location: [G alpha \(12/13\) signalling events](#)

Stable identifier: R-BTA-418574

Type: transition

Compartments: plasma membrane, cytosol

Inferred from: [G alpha \(12/13\) auto-inactivates by hydrolysing GTP to GDP \(Homo sapiens\)](#)



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.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

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