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


Reactome database release: 72

This document contains 12 pathways (see Table of Contents)

https://reactome.org
Signaling by Interleukins

Stable identifier: R-DRE-449147

Compartments: plasma membrane

Inferred from: Signaling by Interleukins (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
Interleukin-1 family signaling

Location: Signaling by Interleukins

Stable identifier: R-DRE-446652

Compartments: plasma membrane

Inferred from: Interleukin-1 family signaling (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
**Interleukin-2 family signaling**

**Location:** Signaling by Interleukins

**Stable identifier:** R-DRE-451927

**Compartments:** plasma membrane

**Inferred from:** Interleukin-2 family signaling (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](http://www.pantherdb.org/about.jsp)
Interleukin-3, Interleukin-5 and GM-CSF signaling

Location: Signaling by Interleukins

Stable identifier: R-DRE-512988

Compartments: plasma membrane

Inferred from: Interleukin-3, Interleukin-5 and GM-CSF signaling (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
Interleukin-4 and Interleukin-13 signaling

Location: Signaling by Interleukins

Stable identifier: R-DRE-6785807

Inferred from: Interleukin-4 and Interleukin-13 signaling (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.panttherdb.org/about.jsp
**Interleukin-6 family signaling**

**Location:** Signaling by Interleukins

**Stable identifier:** R-DRE-6783589

**Compartments:** plasma membrane, extracellular region

**Inferred from:** Interleukin-6 family signaling (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.

[a href='/electronic_inference_compara.html' target = 'NEW']More details and caveats of the event inference in Reactome. For details on PANTHER see also: [a href='http://www.pantherdb.org/about.jsp' target='NEW']http://www.pantherdb.org/about.jsp
**Interleukin-7 signaling**

**Location:** Signaling by Interleukins

**Stable identifier:** R-DRE-1266695

**Inferred from:** Interleukin-7 signaling (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](http://www.pantherdb.org/about.jsp)
**Interleukin-10 signaling**

**Location:** Signaling by Interleukins

**Stable identifier:** R-DRE-6783783

**Inferred from:** Interleukin-10 signaling (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://reactome.org/electronic_inference_compara.html) For details on PANTHER see also: [http://www.pantherdb.org/about.jsp](http://www.pantherdb.org/about.jsp)
**Interleukin-12 family signaling**

**Location:** Signaling by Interleukins

**Stable identifier:** R-DRE-447115

**Inferred from:** Interleukin-12 family signaling (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.

<a href='/electronic_inference_compara.html' target='NEW'>More details and caveats of the event inference in Reactome. For details on PANTHER see also: <a href='http://www.pantherdb.org/about.jsp' target='NEW'>http://www.pantherdb.org/about.jsp</a>
Interleukin-17 signaling

Location: Signaling by Interleukins

Stable identifier: R-DRE-448424

Inferred from: Interleukin-17 signaling (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
Interleukin-20 family signaling

Location: Signaling by Interleukins

Stable identifier: R-DRE-8854691

Inferred from: Interleukin-20 family signaling (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.

<a href='/electronic_inference_compara.html' target = 'NEW'>More details and caveats of the event inference in Reactome. For details on PANTHER see also: <a href='http://www.pantherdb.org/about.jsp' target='NEW'>http://www.pantherdb.org/about.jsp
Other interleukin signaling

Location: Signaling by Interleukins

Stable identifier: R-DRE-449836

Inferred from: Other interleukin signaling (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
Table of Contents

Introduction 1

- Signaling by Interleukins 2
  - Interleukin-1 family signaling 3
  - Interleukin-2 family signaling 4
  - Interleukin-3, Interleukin-5 and GM-CSF signaling 5
  - Interleukin-4 and Interleukin-13 signaling 6
  - Interleukin-6 family signaling 7
  - Interleukin-7 signaling 8
  - Interleukin-10 signaling 9
  - Interleukin-12 family signaling 10
  - Interleukin-17 signaling 11
  - Interleukin-20 family signaling 12
  - Other interleukin signaling 13

Table of Contents 14