Interleukin-20 family signaling
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: 69

This document contains 1 pathway and 28 reactions (see Table of Contents)
Interleukin-20 family signaling  

**Stable identifier:** R-BTA-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.

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)
**JAK1 binds IL20RA**

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987039

**Type:** omitted

**Compartments:** cytosol, plasma membrane

**Inferred from:** JAK1 binds IL20RA (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/parologue (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)

**Followed by:** IL20RA binds IL20RB
IL20RA binds IL20RB

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-448744

**Type:** omitted

**Compartments:** plasma membrane, cytosol

**Inferred from:** IL20RA binds IL20RB (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.


For details on PANTHER see also: [http://www.pantherdb.org/about.jsp](http://www.pantherdb.org/about.jsp)

**Preceded by:** JAK1 binds IL20RA
IL19:IL20RA:JAK1:IL20RB phosphorylates JAK1

Location: Interleukin-20 family signaling

Stable identifier: R-BTA-8987084

Type: omitted

Compartments: cytosol, extracellular region, plasma membrane

Inferred from: IL19:IL20RA:JAK1:IL20RB phosphorylates JAK1 (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
IL20:IL20RA:JAK1:IL20RB binds JAK2,JAK3

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987220

**Type:** omitted

**Compartments:** cytosol, extracellular region, plasma membrane

**Inferred from:** IL20:IL20RA:JAK1:IL20RB binds JAK2,JAK3 (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

**Followed by:** IL20:IL20RA:JAK1:IL20RB:JAK2,JAK3 phosphorylates JAK2,JAK3
IL20:IL20RA:JAK1:IL20RB:JAK2,JAK3 phosphorylates JAK2,JAK3

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987179

**Type:** omitted

**Compartments:** cytosol, extracellular region, plasma membrane

**Inferred from:** IL20:IL20RA:JAK1:IL20RB:JAK2,JAK3 phosphorylates JAK2,JAK3 (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)

**Preceded by:** IL20:IL20RA:JAK1:IL20RB binds JAK2,JAK3
JAK1 in IL24:IL20RA:JAK1:IL20RB is phosphorylated

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987129

**Type:** transition

**Compartments:** cytosol, extracellular region, plasma membrane

**Inferred from:** JAK1 in IL24:IL20RA:JAK1:IL20RB 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:

Followed by: IL24:p-IL20RA:p-JAK1:IL20RB binds STAT1,STAT3
**IL24:p-IL20RA:p-JAK1:IL20RB binds STAT1,STAT3**

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987097

**Type:** omitted

**Compartments:** cytosol, extracellular region, plasma membrane

**Inferred from:** IL24:p-IL20RA:p-JAK1:IL20RB binds STAT1,STAT3 (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)

**Preceded by:** JAK1 in IL24:IL20RA:JAK1:IL20RB is phosphorylated

**Followed by:** IL24:IL20RA:p-JAK1:IL20RB:STAT1,STAT3 phosphorylates STAT1 or STAT3
IL24:IL20RA:p-JAK1:IL20RB:STAT1,STAT3 phosphorylates STAT1 or STAT3

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987150

**Type:** omitted

**Compartments:** cytosol, extracellular region, plasma membrane

**Inferred from:** IL24:IL20RA:p-JAK1:IL20RB:STAT1,STAT3 phosphorylates STAT1 or STAT3 (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/parologue (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.

For details on PANTHER see also: [http://www.pantherdb.org/about.jsp](http://www.pantherdb.org/about.jsp)

**Preceded by:** IL24:p-IL20RA:p-JAK1:IL20RB binds STAT1,STAT3

**Followed by:** p-STAT1,p-STAT3 dissociate from IL24:IL20RA:p-Y1022,Y1023-JAK1:IL20RB:p-STAT1, p-STAT3

[Link to more details and caveats of the event inference in Reactome]
p-STAT1, p-STAT3 dissociate from IL24:IL20RA:p-Y1022,Y1023-JAK1:IL20RB:p-STAT1, p-STAT3

Location: Interleukin-20 family signaling

Stable identifier: R-BTA-8987270

Type: omitted

Compartments: cytosol, extracellular region, plasma membrane

Inferred from: p-STAT1, p-STAT3 dissociate from IL24:IL20RA:p-Y1022,Y1023-JAK1:IL20RB:p-STAT1, p-STAT3 (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><a href='http://www.pantherdb.org/about.jsp' target='NEW'>http://www.pantherdb.org/about.jsp</a>

Preceded by: IL24:IL20RA:p-JAK1:IL20RB:STAT1,STAT3 phosphorylates STAT1 or STAT3

Followed by: p-STAT1 dimerizes
p-STAT1 dimerizes ➧

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987007

**Type:** omitted

**Compartments:** cytosol

**Inferred from:** p-STAT1 dimerizes (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:** p-STAT1 dimer translocates from the cytosol to the nucleoplasm
p-STAT1 dimer translocates from the cytosol to the nucleoplasm

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987218

**Type:** omitted

**Compartments:** cytosol, nucleoplasm

**Inferred from:** p-STAT1 dimer translocates from the cytosol to the nucleoplasm (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)

**Preceded by:** p-STAT1 dimerizes
IL24:IL22RA1:JAK1:IL20RB phosphorylates JAK1

Location: Interleukin-20 family signaling

Stable identifier: R-BTA-8987012

Type: omitted

Compartments: cytosol, extracellular region, plasma membrane

Inferred from: IL24:IL22RA1:JAK1:IL20RB phosphorylates JAK1 (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
**IL10RB binds TYK2**

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987223

**Type:** binding

**Compartments:** plasma membrane, cytosol

**Inferred from:** IL10RB binds TYK2 (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/parologue (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:** IFNL2,IFNL3 bind IL10RB:TYK2 and IFNLR1:JAK1
IL26:IL20RA:JAK1:IL10RB:TYK2 phosphorylates JAK1, TYK2

Location: Interleukin-20 family signaling

Stable identifier: R-BTA-8986994

Type: omitted

Compartments: cytosol, extracellular region, plasma membrane

Inferred from: IL26:IL20RA:JAK1:IL10RB:TYK2 phosphorylates JAK1, TYK2 (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/parologue (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.</a> For details on PANTHER see also: <a href='http://www.pantherdb.org/about.jsp' target='NEW'>http://www.pantherdb.org/about.jsp</a>

Followed by: IL26:IL10RB:p-TYK2:IL20RA:p-JAK1 binds STAT1, STAT3
IL26:IL10RB:p-TYK2:IL20RA:p-JAK1 binds STAT1, STAT3

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987080

**Type:** omitted

**Compartments:** cytosol, extracellular region, plasma membrane

**Inferred from:** IL26:IL10RB:p-TYK2:IL20RA:p-JAK1 binds STAT1, STAT3 (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)

**Preceded by:** IL26:IL20RA:JAK1:IL10RB:TYK2 phosphorylates JAK1, TYK2

**Followed by:** IL26:IL10RB:p-TYK2:IL20RA:p-JAK1:STAT1,STAT3 phosphorylates STAT1,STAT3
IL26:IL10RB:p-TYK2:IL20RA:p-JAK1:STAT1,STAT3 phosphorylates STAT1,STAT3

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987255

**Type:** omitted

**Compartments:** plasma membrane, cytosol, extracellular region

**Inferred from:** IL26:IL10RB:p-TYK2:IL20RA:p-JAK1:STAT1,STAT3 phosphorylates STAT1,STAT3 (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

**Preceded by:** IL26:IL10RB:p-TYK2:IL20RA:p-JAK1 binds STAT1, STAT3

**Followed by:** p-STAT1 and p-STAT3 dissociates from IL26:IL10RB:p-TYK2:IL20RA:p-JAK1
p-STAT1 and p-STAT3 dissociates from IL26:IL10RB:p-TYK2:IL20RA:p-JAK1

Location: Interleukin-20 family signaling

Stable identifier: R-BTA-8987230

Type: omitted

Compartments: cytosol, extracellular region, plasma membrane

Inferred from: p-STAT1 and p-STAT3 dissociates from IL26:IL10RB:p-TYK2:IL20RA:p-JAK1 (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: IL26:IL10RB:p-TYK2:IL20RA:p-JAK1:STAT1,STAT3 phosphorylates STAT1,STAT3

Followed by: p-STAT1 dimerizes
IL22RA1 binds JAK1

Location: Interleukin-20 family signaling

Stable identifier: R-BTA-8987043

Type: binding

Compartments: cytosol, plasma membrane

Inferred from: IL22RA1 binds JAK1 (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
**IL22:IL22RA1:JAK1:IL10RB:TYK2 phosphorylates JAK1, TYK2**

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987042

**Type:** omitted

**Compartments:** plasma membrane, cytosol, extracellular region

**Inferred from:** IL22:IL22RA1:JAK1:IL10RB:TYK2 phosphorylates JAK1, TYK2 (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:** IL22:IL22RA1:p-JAK1:IL10RB:p-TYK2 phosphorylates IL22RA

https://reactome.org
IL22:IL22RA1:p-JAK1:IL10RB:p-TYK2 phosphorylates IL22RA

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8986995

**Type:** omitted

**Compartments:** cytosol, extracellular region, plasma membrane

**Inferred from:** IL22:IL22RA1:p-JAK1:IL10RB:p-TYK2 phosphorylates IL22RA (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)

**Preceded by:** IL22:IL22RA1:JAK1:IL10RB:TYK2 phosphorylates JAK1, TYK2

**Followed by:** IL22:pY251,pY301:IL22RA1:pYJAK1:PTPN11:IL10RB:pTYK2 binds PTPN11
IL22:p\(\text{Y251,p\text{Y301}}\)IL22RA1:p\(\text{JAK1:PTPN11:IL10RB:p\text{TYK2}}\) binds PTPN11

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987132

**Type:** binding

**Compartments:** cytosol, extracellular region, plasma membrane

**Inferred from:** IL22:p\(\text{Y251,p\text{Y301}}\)IL22RA1:p\(\text{JAK1:PTPN11:IL10RB:p\text{TYK2}}\) binds PTPN11 (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)

**Preceded by:** IL22:IL22RA1:p-JAK1:IL10RB:p-TYK2 phosphorylates IL22RA
**JAK1 binds IFNLR1**

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987120

**Type:** binding

**Compartments:** cytosol, extracellular region, plasma membrane

**Inferred from:** JAK1 binds IFNLR1 (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:** IFNL2, IFNL3 bind IL10RB:TYK2 and IFNLR1:JAK1
IFNL2,IFNL3 bind IL10RB:TYK2 and IFNLR1:JAK1

Location: Interleukin-20 family signaling

Stable identifier: R-BTA-8987105

Type: omitted

Compartments: cytosol, extracellular region, plasma membrane

Inferred from: IFNL2,IFNL3 bind IL10RB:TYK2 and IFNLR1:JAK1 (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

Preceded by: JAK1 binds IFNLR1, IL10RB binds TYK2
IFNL1:IFNLR1:JAK1:IL10RB:TYK2 phosphorylates JAK1,TYK2

Location: Interleukin-20 family signaling

Stable identifier: R-BTA-8987202

Type: omitted

Compartments: cytosol, extracellular region, plasma membrane

Inferred from: IFNL1:IFNLR1:JAK1:IL10RB:TYK2 phosphorylates JAK1,TYK2 (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.</a> For details on PANTHER see also: <a href='http://www.pantherdb.org/about.jsp' target='NEW'>http://www.pantherdb.org/about.jsp</a>

Followed by: IFNL1:IFNLR1:p-JAK1:IL10RB:p-TYK2 phosphorylates IFNLR1
IFNL1:IFNLR1:p-JAK1:IL10RB:p-TYK2 phosphorylates IFNLR1

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987040

**Type:** transition

**Compartments:** cytosol, extracellular region, plasma membrane

**Inferred from:** IFNL1:IFNLR1:p-JAK1:IL10RB:p-TYK2 phosphorylates IFNLR1 (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/parologue (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:** IFNL1:IFNLR1:JAK1:IL10RB:TYK2 phosphorylates JAK1,TYK2

**Followed by:** IFNL1:p-Y434,Y517-IFNLR1:p-JAK1:IL10RB:p-TYK2 binds STAT1, STAT2, STAT3, STAT4, STAT5
IFNL1:p-Y434,Y517-IFNLR1:p-JAK1:IL10RB:p-TYK2 binds STAT1, STAT2, STAT3, STAT4, STAT5

**Location:** Interleukin-20 family signaling

**Stable identifier:** R-BTA-8987266

**Type:** omitted

**Compartments:** cytosol, extracellular region, plasma membrane

**Inferred from:** IFNL1:p-Y434,Y517-IFNLR1:p-JAK1:IL10RB:p-TYK2 binds STAT1, STAT2, STAT3, STAT4, STAT5 (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:** IFNL1:IFNLR1:p-JAK1:IL10RB:p-TYK2 phosphorylates IFNLR1

**Followed by:** IFNL1:p-Y343,Y517-IFNLR1:p-JAK1:IL10RB:p-TYK2:STAT1 phosphorylates STAT1, STAT2, STAT3, STAT4 and STAT5
IFNL1:p-Y343,Y517-IFNLR1:p-JAK1:IL10RB:p-TYK2:STAT1 phosphorylates STAT1, STAT2, STAT3, STAT4 and STAT5

Location: Interleukin-20 family signaling
Stable identifier: R-BTA-8986985
Type: omitted
Compartments: cytoplasm, extracellular region, plasma membrane

Inferred from: IFNL1:p-Y343,Y517-IFNLR1:p-JAK1:IL10RB:p-TYK2:STAT1 phosphorylates STAT1, STAT2, STAT3, STAT4 and STAT5 (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: IFNL1:p-Y434,Y517-IFNLR1:p-JAK1:IL10RB:p-TYK2 binds STAT1, STAT2, STAT3, STAT4, STAT5


Location: Interleukin-20 family signaling

Stable identifier: R-BTA-8987033

Type: omitted

Compartments: cytosol, extracellular region, plasma membrane


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/parologue (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: IFNL1:p-Y343,Y517-IFNLR1:p-JAK1:IL10RB:p-TYK2:STAT1 phosphorylates STAT1, STAT2, STAT3, STAT4 and STAT5

Followed by: p-STAT1 dimerizes
Table of Contents

Introduction

* Interleukin-20 family signaling
  * JAK1 binds IL20RA
  * IL20RA binds IL20RB
  * IL19:IL20RA:JAK1:IL20RB phosphorylates JAK1
  * IL20:IL20RA:JAK1:IL20RB binds JAK2,JAK3
  * IL20:IL20RA:JAK1:IL20RB:JAK2,JAK3 phosphorylates JAK2,JAK3
  * JAK1 in IL24:IL20RA:JAK1:IL20RB is phosphorylated
  * IL24:p-IL20RA:p-JAK1:IL20RB binds STAT1,STAT3
  * IL24:IL20RA:p-JAK1:IL20RB:STAT1,STAT3 phosphorylates STAT1 or STAT3
  * p-STAT1,p-STAT3 dissociate from IL24:IL20RA:p-Y1022,Y1023-JAK1:IL20RB:p-STAT1, p-STAT3
  * p-STAT1 dimerizes
  * p-STAT1 dimer translocates from the cytosol to the nucleoplasm
  * IL24:IL22RA1:JAK1:IL20RB phosphorylates JAK1
  * IL10RB binds TYK2
  * IL26:IL20RA:JAK1:IL10RB:TYK2 phosphorylates JAK1, TYK2
  * IL26:IL10RB:p-TYK2:IL20RA:p-JAK1 binds STAT1, STAT3
  * IL26:IL10RB:p-TYK2:IL20RA:p-JAK1:STAT1,STAT3 phosphorylates STAT1,STAT3
  * p-STAT1 and p-STAT3 dissociates from IL26:IL10RB:p-TYK2:IL20RA:p-JAK1
  * IL22RA1 binds JAK1
  * IL22:IL22RA1:JAK1:IL10RB:TYK2 phosphorylates JAK1,TYK2
  * IL22:IL22RA1:p-JAK1:IL10RB:p-TYK2 phosphorylates IL22RA
  * IL22:pY251,pY301:IL22RA1:pJAK1:PTPN11:IL10RB:pTYK2 binds PTPN11
  * JAK1 binds IFNLR1
  * IFNL2,IFNL3 bind IL10RB:TYK2 and IFNLR1:JAK1
  * IFNL1:IFNLR1:JAK1:IL10RB:TYK2 phosphorylates JAK1,TYK2
  * IFNL1:IFNLR1:p-JAK1:IL10RB:p-TYK2 phosphorylates IFNLR1
  * IFNL1:p-Y434,Y517:IFNLR1:p-JAK1:IL10RB:p-TYK2 binds STAT1, STAT2, STAT3, STAT4, STAT5
  * IFNL1:p-Y343,Y517:IFNLR1:p-JAK1:IL10RB:p-TYK2:STAT1 phosphorylates STAT1, STAT2, STAT3, STAT4 and STAT5