

IL24:IL22RA1:p-JAK1:IL20RB binds STAT3

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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

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Reactome database release: 88

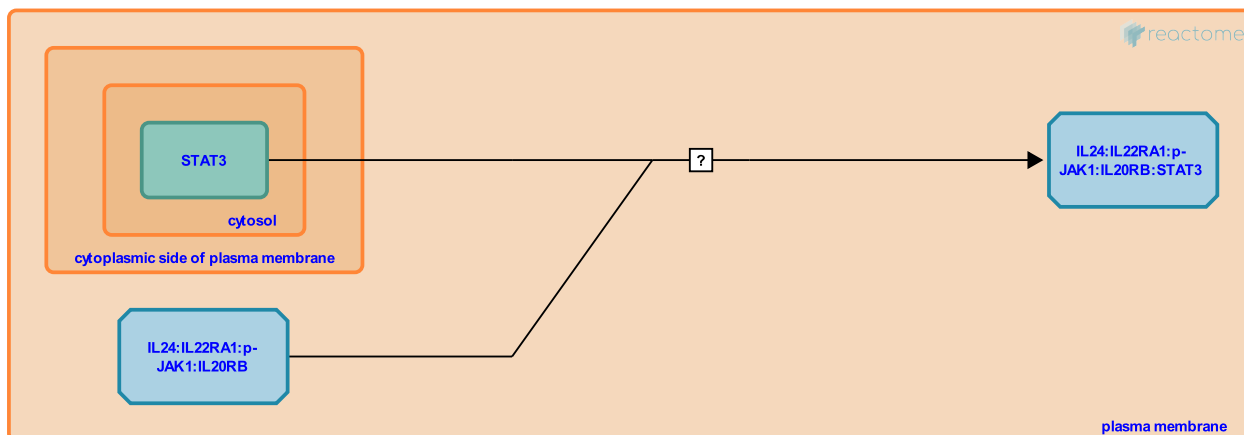
This document contains 1 reaction ([see Table of Contents](#))

IL24:IL22RA1:p-JAK1:IL20RB binds STAT3 [↗](#)

Stable identifier: R-HSA-8987063

Type: uncertain

Compartments: plasma membrane, cytosol, extracellular region



Signal transducer and activator of transcription 3 (STAT3) is believed to bind the Interleukin-24 (IL24) receptor complex (Parrish Novak et al. 2002, Wang et al. 2002, Andoh et al. 2009). There are two forms of the IL24 receptor. The receptor complex represented here consists of IL24, Interleukin 22 receptor subunit alpha 1 (IL22RA1), phosphorylated Tyrosine-protein kinase JAK1 (JAK1) and Interleukin-20 receptor subunit beta (IL20RB). Both forms of the IL24 receptor can activate STAT3 (Dumoutier et al. 2001, Wang et al. 2002). Based on the consensus understanding of JAK/STAT signaling, STAT3 activation is very likely to be preceded by STAT3 binding to the IL24 receptor.

This is a black box event because STAT3 binding is inferred as a prerequisite for STAT3 phosphorylation, based on STAT3 binding by the related IL10 receptor (Riley et al. 1999).

Literature references

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Editions

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