IL15:IL15RA:p-Y-IL2RB:p-Y-JAK1:p-Y-IL2RG:p-Y-JAK3 binds STAT3 and STAT5

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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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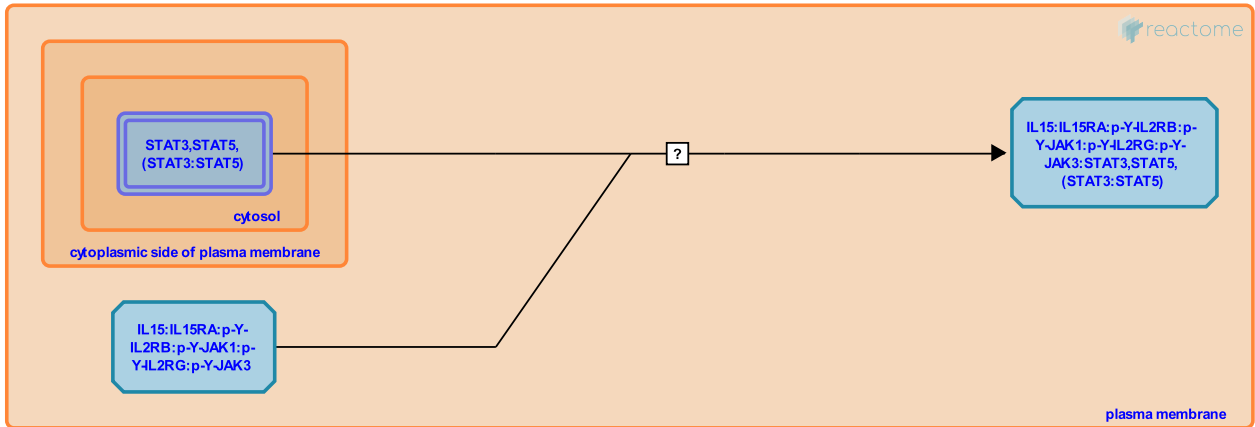
Reactome database release: 88

This document contains 1 reaction (see Table of Contents)

IL15:IL15RA:p-Y-IL2RB:p-Y-JAK1:p-Y-IL2RG:p-Y-JAK3 binds STAT3 and STAT5 ↗

Stable identifier: R-HSA-8983378

Type: uncertain

Compartments: cytosol, extracellular region, plasma membrane

Signal transducer and activator of transcription 3 (STAT3), Signal transducer and activator of transcription 5A and 5B (STAT5) are believed to bind the Interleukin-15 (IL15) receptor complex, which consists of IL15, Interleukin-15 receptor alpha subunit (IL15RA, IL15Rα), Interleukin-2 receptor beta subunit (IL2RB, IL2Rβ), which is associated with JAK1 and Interleukin receptor gamma subunit, which is associated with JAK3 (Johnston et al. 1995). This is a black-box event because STAT binding is inferred from their subsequent phosphorylation.

Literature references

Ortaldo, JR., Finbloom, DS., Shibuya, K., Kaplan, D., Giri, JD., Bacon, CM. et al. (1995). Tyrosine phosphorylation and activation of STAT5, STAT3, and Janus kinases by interleukins 2 and 15. *Proc Natl Acad Sci U S A, 92*, 8705-9. ↗

Editions

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