

IL10 dimer:2xIL10RA1:JAK1 binds

IL10RB:TYK2

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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: 70

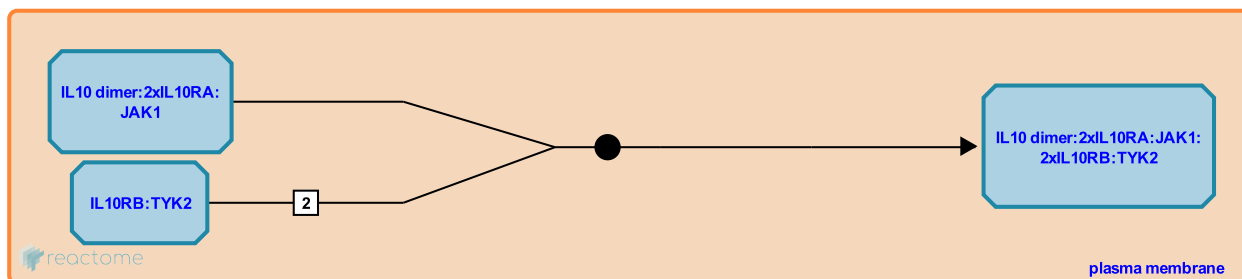
This document contains 1 reaction ([see Table of Contents](#))

IL10 dimer:2xIL10RA:JAK1 binds IL10RB:TYK2 ↗

Stable identifier: R-HSA-449811

Type: binding

Compartments: plasma membrane, extracellular region, cytosol



Interleukin-10 receptor chain B (IL10RB, IL10R2, CRF2-4) binds the IL1-10:IL10RA complex, causing conformational changes that allow it to bind IL-10 (Yoon et al. 2010). IL10RB is essential for signal transduction (Kotenko et al. 1997). It is constitutively bound to the JAK family kinase TYK2 (Kotenko et al. 1997, Spencer et al. 1998).

IL10RB can also combine with either IL-22R1, IFN-lambdaR1 or IL-20R1 to assemble the IL-22, IFN-lambda or IL-26 receptor complexes, respectively (Kotenko & Langer 2004).

Literature references

Yoon, SI., Logsdon, NJ., Sheikh, F., Donnelly, RP., Walter, MR. (2006). Conformational changes mediate interleukin-10 receptor 2 (IL-10R2) binding to IL-10 and assembly of the signaling complex. *J. Biol. Chem.*, 281, 35088-96. ↗

Kotenko, SV., Krause, CD., Izotova, LS., Pollack, BP., Wu, W., Pestka, S. (1997). Identification and functional characterization of a second chain of the interleukin-10 receptor complex. *EMBO J*, 16, 5894-903. ↗

Editions

2015-06-17	Authored	Jupe, S.
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