

Activation of STAT5a/b by JAK2

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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

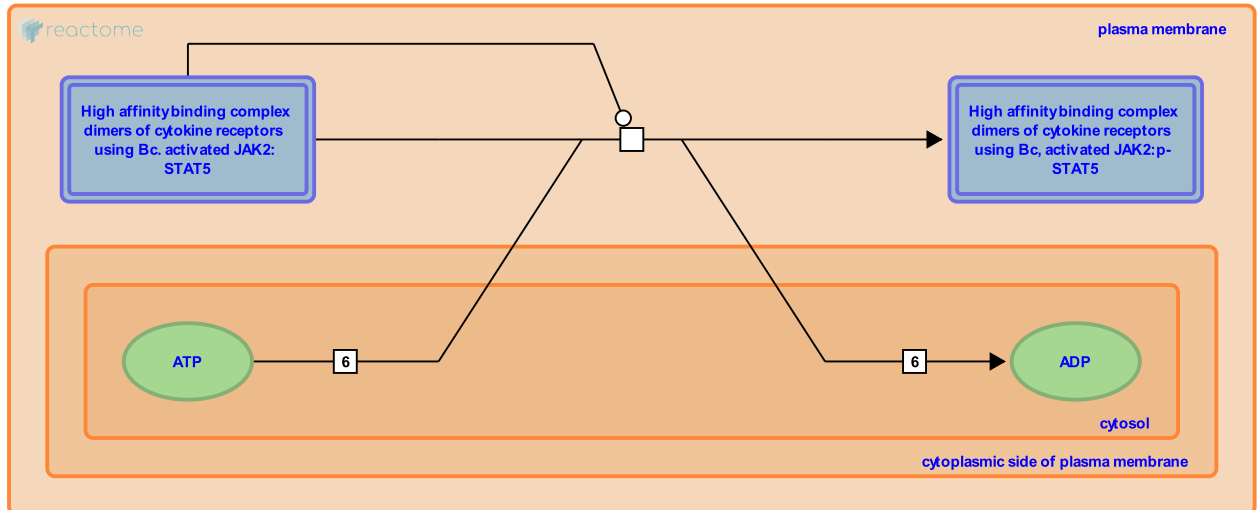
This document contains 1 reaction ([see Table of Contents](#))

Activation of STAT5a/b by JAK2 [↗](#)

Stable identifier: R-HSA-879909

Type: transition

Compartments: cytosol, plasma membrane



JAK2 phosphorylates STAT5; phosphorylated STAT5 dimerizes and translocates to the nucleus (Darnell et al., 1994), binds DNA and activates target genes including c-fos, pim-1, oncostatin M, and Id-1 (Mui et al. 1996). STAT5 activation is believed to be the primary signaling mechanism for Bc (Ihle, 2001).

Literature references

Flores-Morales, A., Pircher, T.J., Gustafsson, J.A., Norstedt, G., Haldosén, L.A., Wood, T.J. et al. (1998). In vitro interaction between STAT 5 and JAK 2; dependence upon phosphorylation status of STAT 5 and JAK 2. *Mol Cell Endocrinol*, 138, 1-10. [↗](#)

Editions

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|------------|----------|-------------------------|
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