JAK2 phosphorylates SHC1 in EPO:p-8Y-EPOR:p-12Y-JAK2:LYN:p-CRKL:RABGEF1:SHC1

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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.

Literature references

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Reactome database release: 88
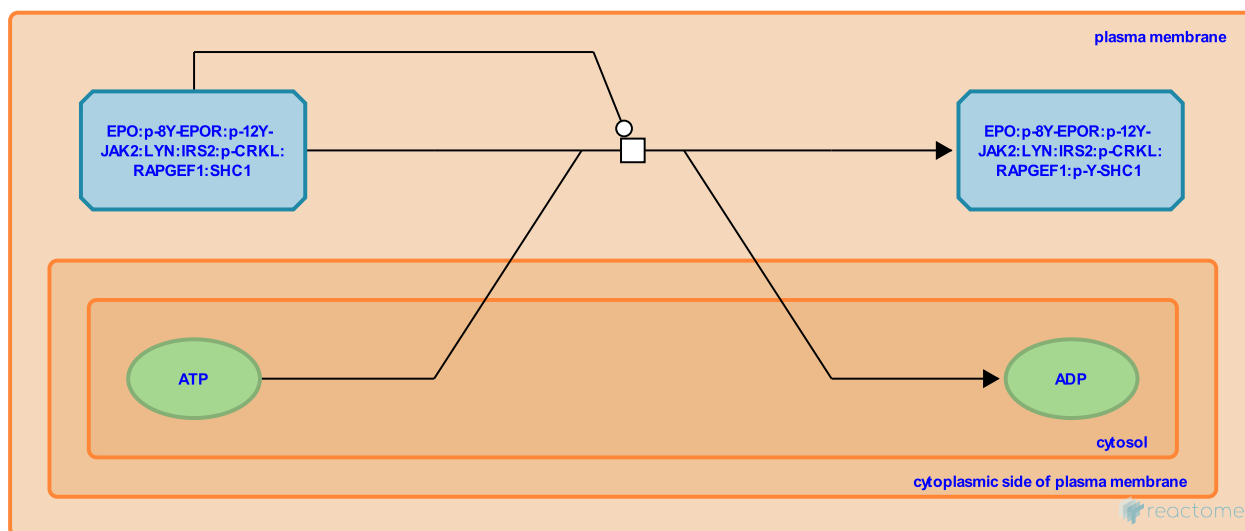
This document contains 1 reaction (see Table of Contents)

JAK2 phosphorylates SHC1 in EPO:p-8Y-EPOR:p-12Y-JAK2:LYN:p-CRKL:RABGEF1:SHC1 ↗

Stable identifier: R-HSA-9029155

Type: transition

Compartments: plasma membrane

Inferred from: Jak2 phosphorylates Shc1 in Epo:p-8Y-Epor:p-12Y-Jak2:Lyn:Irs2:p-Crkl:Rapgef:Shc1 (Mus musculus)

Phosphorylated JAK2 associated with the EPOR complex phosphorylates SHC1 (Damen et al. 1993, Verma et al. 2014) bound to CRKL in the EPOR complex. The phosphorylated SHC1 serves as a scaffold to bind downstream effectors including GRB2:VAV1 and GRB2:SOS1.

Literature references

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Stokes, MP., Verma, R., Schatz, PJ., Leu, K., Wojchowski, DM., Young, PR. et al. (2014). RHEX, a novel regulator of human erythroid progenitor cell expansion and erythroblast development. *J. Exp. Med., 211*, 1715-22. ↗

Editions

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