

IL34 dimer binds PTPRZ1

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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: 76

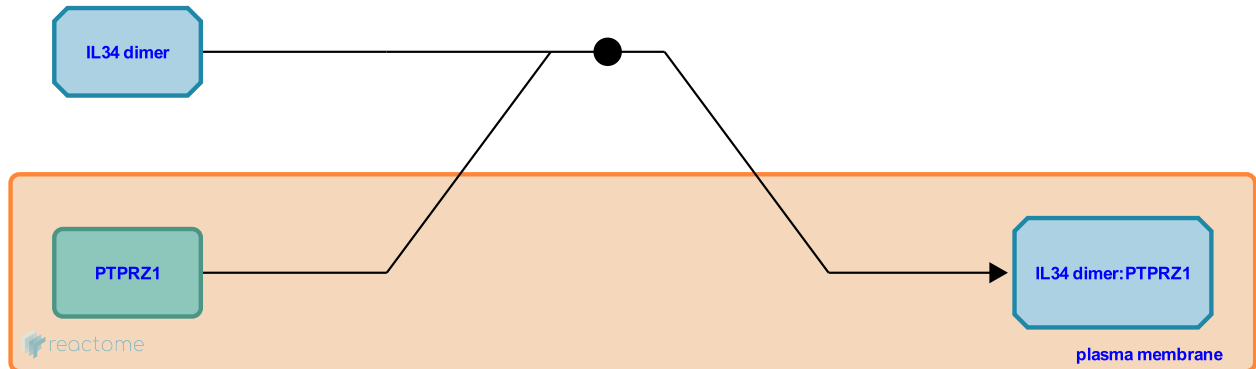
This document contains 1 reaction ([see Table of Contents](#))

IL34 dimer binds PTPRZ1 [↗](#)

Stable identifier: R-HSA-8981657

Type: binding

Compartments: extracellular region, plasma membrane



Interleukin-34 (IL34) signals via the Colony-stimulating factor-1 receptor (CSF1R). It can also bind Receptor-type protein-tyrosine phosphatase zeta (PTPRZ1), a cell surface chondroitin sulfate (CS) proteoglycan. PTPRZ1 is primarily expressed on neural progenitor and glial cells. IL34 selectively bound PTPRZ1 in CSF1R-deficient U251 human glioblastoma cell lysates, inhibiting proliferation, clonogenicity and motility, and promoting an increase in tyrosine phosphorylation of focal adhesion kinase 1 (PTK2) and paxillin (PXN) (Nandii et al. 2013).

Literature references

Nandi, S., Cioce, M., Yeung, YG., Nieves, E., Tesfa, L., Lin, H. et al. (2013). Receptor-type protein-tyrosine phosphatase ζ is a functional receptor for interleukin-34. *J. Biol. Chem.*, 288, 21972-86. [↗](#)

Editions

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