

IL22:pY251,pY301-IL22RA1:pJAK1:PTPN11:IL10RB:pTYK2 binds PTPN11

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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

Fabregat, A., Sidiropoulos, K., Viteri, G., Forner, O., Marin-Garcia, P., Arnau, V. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics*, 18, 142. [↗](#)

Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)

Fabregat, A., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res*, 46, D649-D655. [↗](#)

Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 88

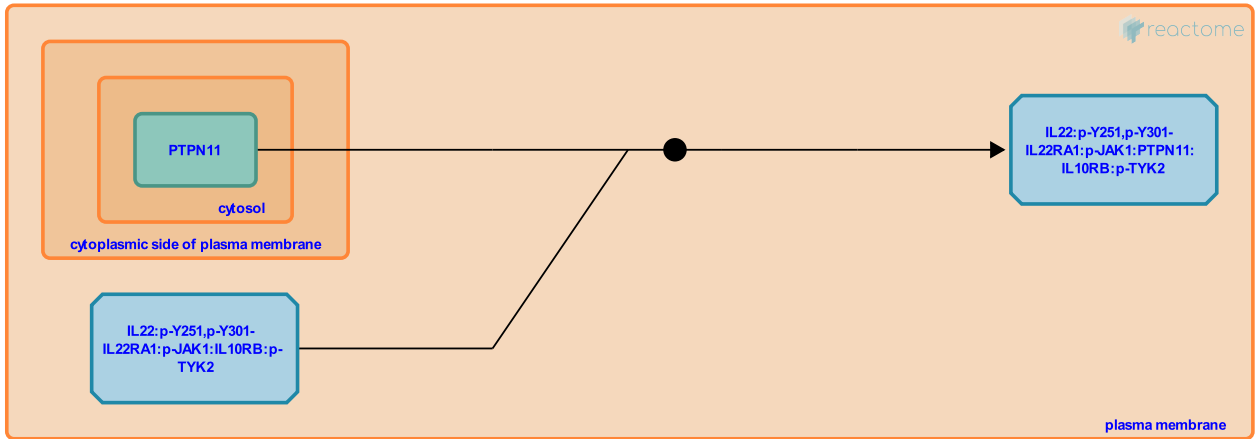
This document contains 1 reaction ([see Table of Contents](#))

IL22:pY251,pY301IL22RA1:pJAK1:PTPN11:IL10RB:pTYK2 binds PTPN11 ↗

Stable identifier: R-HSA-8987132

Type: binding

Compartments: cytosol, extracellular region, plasma membrane



Tyrosine-protein phosphatase non-receptor type 11 (PTPN11, SHP2) binds the Interleukin-22 (IL22) receptor complex. Tyrosines 251 and 301 of IL22RA1 are required for PTPN11 binding (Meng et al. 2010).

Literature references

Wu, J., Ke, Y., Gui, Q., Xu, Q., Wang, C., Zhang, S. et al. (2010). Association of Shp2 with phosphorylated IL-22R1 is required for interleukin-22-induced MAP kinase activation. *J Mol Cell Biol*, 2, 223-30. ↗

Editions

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