Active FLT3 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

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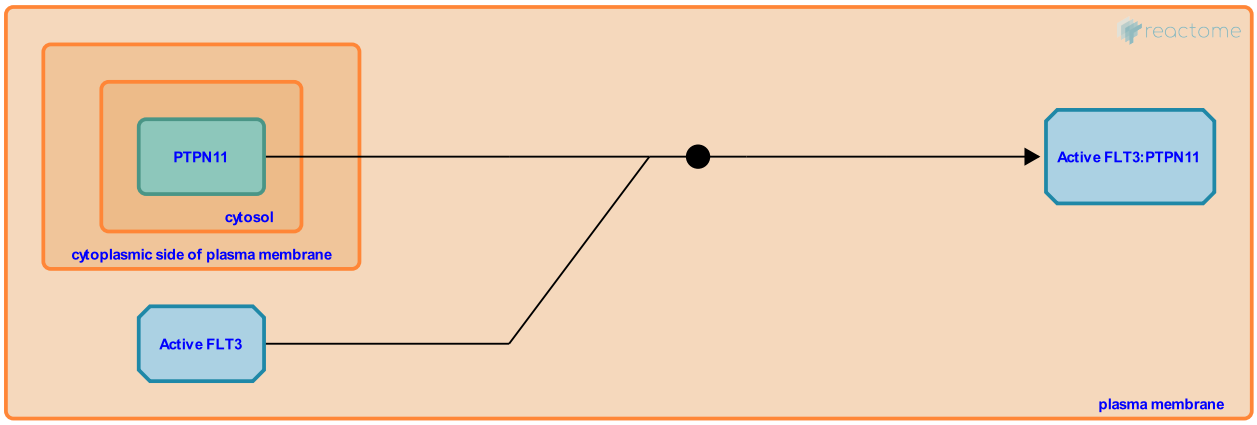
Active FLT3 binds PTPN11

Stable identifier: R-HSA-9604969

Type: binding

Compartments: cytosol, plasma membrane

Inferred from: Active Flt3 binds Ptpn11 (Mus musculus)



Feline McDonough Sarcoma-like tyrosine kinase (FLT3) is a member of the class III tyrosine kinase receptor family. Ligand binding induces conformational changes in the FLT3 receptor, which facilitates its dimerization and autophosphorylation. Once fully active, tyrosine-protein phosphatase non-receptor type 11 (PTPN11) has been reported to directly bind to the Y599 site of Flt3 receptors thereby facilitating downstream regulation of effectors (Heiss et al. 2006, Nabinger et al. 2013). Experiments confirming this event were performed in mouse cells. Interaction of FLT3 with PTPN11 is known to trigger STAT5 activation in various pathological conditions (Mizuki M et al. 2000, Rocnik JL et al. 2006).

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Editions

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