# Interaction of Src family kinases with p-KIT

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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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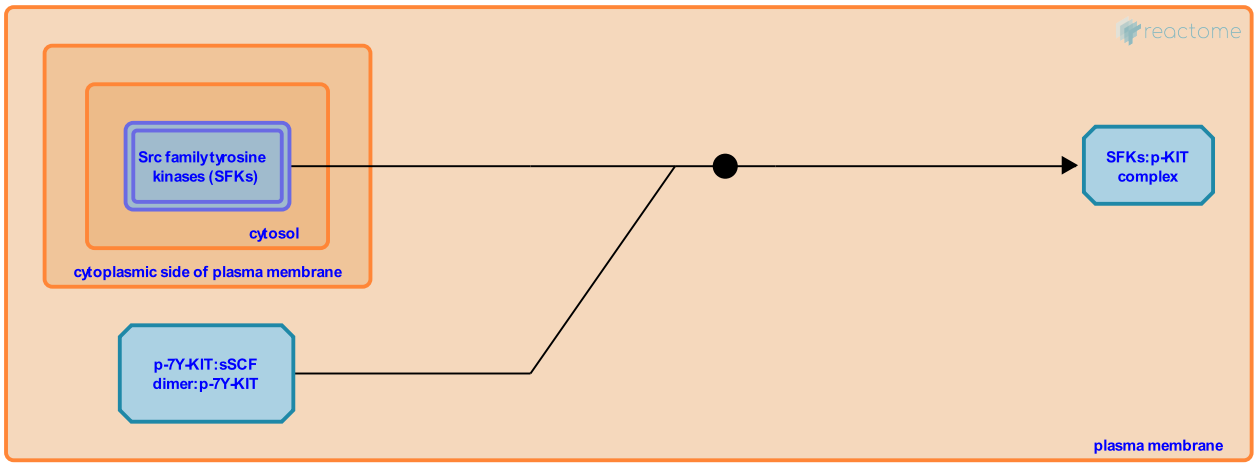
**Stable identifier:** R-HSA-205205

**Type:** binding

**Compartments:** plasma membrane, cytosol, extracellular region

**Inferred from:** Interaction of Src kinases with c-Kit (Mus musculus)




Binding of SCF to KIT induces the activation and rapid increase in kinase activity of multiple Src family kinases (SFK), including Src, Lck, Tec, Fyn, and Lyn (Timokhina et al. 1998, Krystal et al. 1998, Linnekin et al. 1997, Lennartsson et al. 1999, Tang et al. 1994, Samayawardhena et al. 2007). The tyrosine residues Y568 and Y570 in KIT juxtamembrane region are involved in the association of SFKs (Price et al. 1997).
SFKs recruited to KIT induce proliferation and chemotaxis in primary hematopoietic progenitor cells or bone marrow derived mast cells (O'Laughlin-Bunner et al. 2001). SCF activated SFKs also mediate a critical signal for lymphocyte development (Agosti et al. 2004). Timokhina et al. demonstrated that Src kinase and PI3-kinase signaling pathways converge to activate Rac1 and JNK after SCF stimulation in BMMC, promoting cell proliferation (Timokhina et al., 1998, Reber et al. 2006 ).

## Editions

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