PDGF binds to extracellular matrix proteins

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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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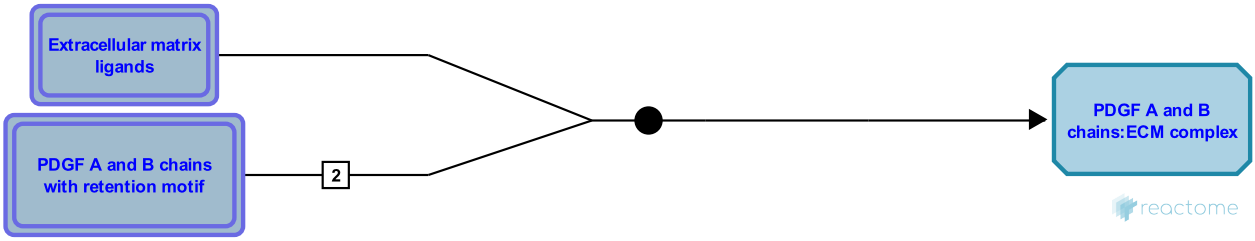
PDGF binds to extracellular matrix proteins ↗

Stable identifier: R-HSA-382054

Type: binding

Compartments: extracellular region



The long splice version of the PDGF-A chain as well as the COOH-terminal part of the PDGF-B precursor contain C-terminal protein motifs that confer retention of the secreted factors. In both the PDGF A- and B-chains, exon 6 encodes a basic sequence that mediates interaction with components of the extracellular matrix. PDGF binds to various types of collagens, thrombospondin and osteopontin; however, the major component of the matrix involved in PDGF binding is likely to be haparan sulphate. The negatively charged sulfate groups on the disaccharide building blocks of heparan sulfate (HS) polysaccharide chains provide binding sites for positively charged amino acid sequence motifs.

The precursor of the B-chain may be retained in the matrix; after maturation when the COOH-terminal retention sequence has been cleaved off, the molecule may become more diffusible.

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Editions

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