

THBS1 (Thrombospondin-1) binds Integrin alpha3beta1, alpha4beta1

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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: 70

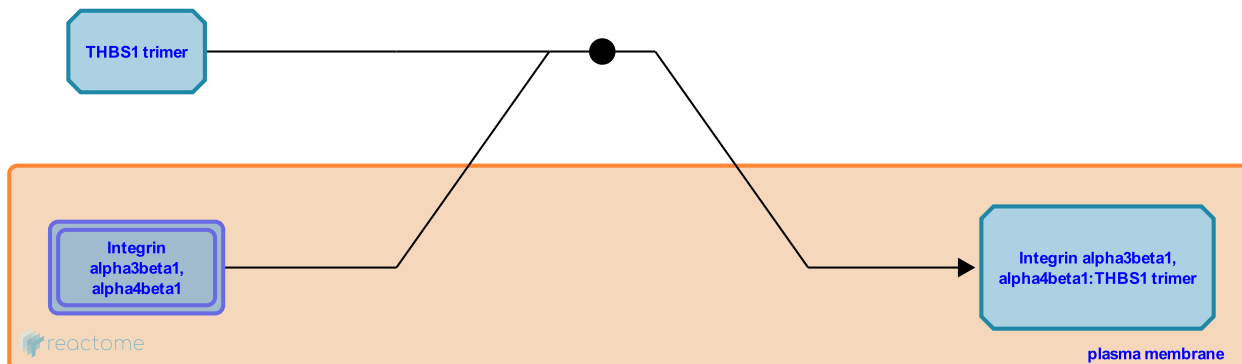
This document contains 1 reaction ([see Table of Contents](#))

THBS1 (Thrombospondin-1) binds Integrin alpha3beta1, alpha4beta1 ↗

Stable identifier: R-HSA-265429

Type: binding

Compartments: extracellular region, plasma membrane



The alpha3beta1 integrin is localized in cell-cell junctions of endothelial cells and this integrin is involved in regulating angiogenesis by interacting with thrombospondin-1 (TSP1). Alpha4beta1 integrin binds to the N-terminal pentraxin modules of TSP1 and stimulates chemotaxis and modulates T cell behavior both positively and negatively.

Literature references

Chandrasekaran, L., He, CZ., Al-Barazi, H., Krutzsch, HC., Iruela-Arispe, ML., Roberts, DD. (2000). Cell contact-dependent activation of alpha3beta1 integrin modulates endothelial cell responses to thrombospondin-1. *Mol Biol Cell*, 11, 2885-900. ↗

Li, Z., Calzada, MJ., Sipes, JM., Cashel, JA., Krutzsch, HC., Annis, DS. et al. (2002). Interactions of thrombospondins with alpha4beta1 integrin and CD47 differentially modulate T cell behavior. *J Cell Biol*, 157, 509-19. ↗

Editions

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