# SPP1 (osteopontin) binds Integrin 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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Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics, 33*, 3461-3467. ↗

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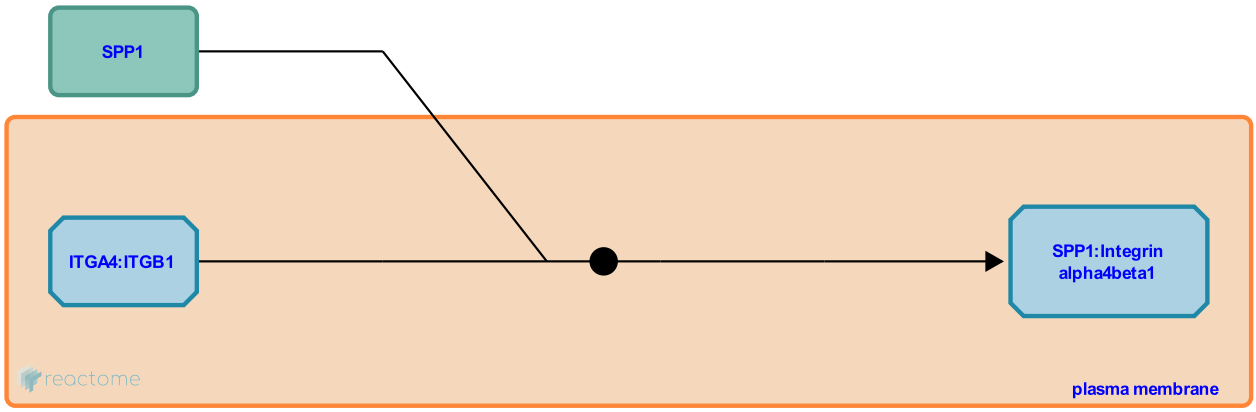
## SPP1 (osteopontin) binds Integrin alpha4beta1 ↗

**Stable identifier:** R-HSA-2752118

**Type:** binding

**Compartments:** plasma membrane, extracellular region

**Inferred from:** Osteopontin binds Integrin alpha4beta1 (Homo sapiens)




Osteopontin (SPP1) is a highly phosphorylated sialoprotein that is a prominent component of the mineralized extracellular matrices of bones and teeth. It provides an adhesive matrix for endothelial and smooth muscle cells during remodeling of the vascular wall following injury. SPP1 binds multiple integrins including alphaVbeta3, alphaVbeta1 and alphaVbeta5 (Liaw et al. 1995), alpha5beta1 (Barry et al. 2000), alpha9beta1 (Smith et al. 1996, Yokosaki et al. 1999) alpha4beta1 (Bayless et al. 1998), alpha8beta1 (Denda et al. 1998) and the receptor CD44 (Katagiri et al. 1999). Integrin alpha4beta1 is expressed on leukocytes, differentiated vascular smooth muscle cells and tumor cells. It has been shown to mediate leukocyte attachment to OPN.

## Editions

| | | |
|---|---|---|
| 2012-08-08 | Authored | Jupe, S. |
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