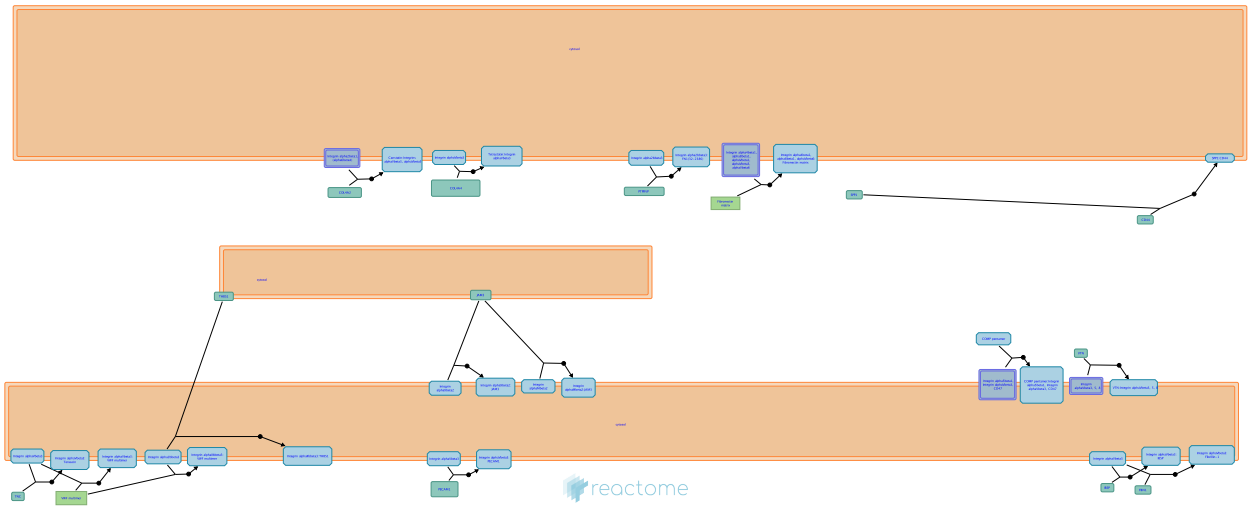
Integrin cell surface interactions



European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

04/09/2021

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

Fabregat, A., Sidiropoulos, K., Viteri, G., Forner, O., Marin-Garcia, P., Arnau, V. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics, 18*, 142. ↗

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

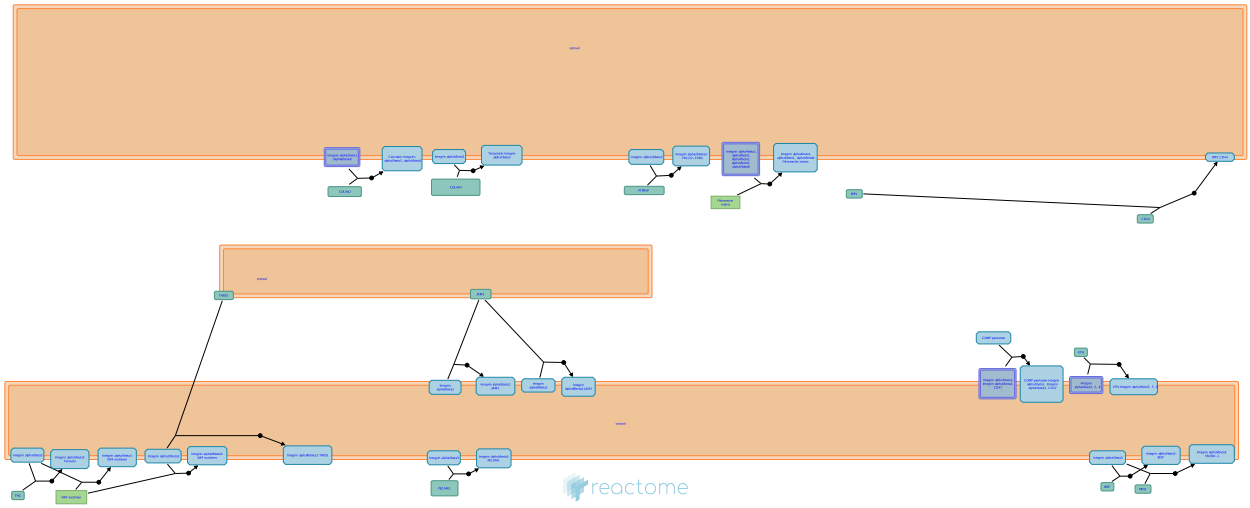
Fabregat, A., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res, 46*, D649-D655. ↗

Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology, 14*, e1005968. ↗

Integrin cell surface interactions ↗

Stable identifier: R-GGA-216083

Inferred from: Integrin cell surface interactions (Homo sapiens)



This event has been computationally inferred from an event that has been demonstrated in another species.

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Canstatin binds integrins alphaVbeta3, alphaVbeta5 ↗

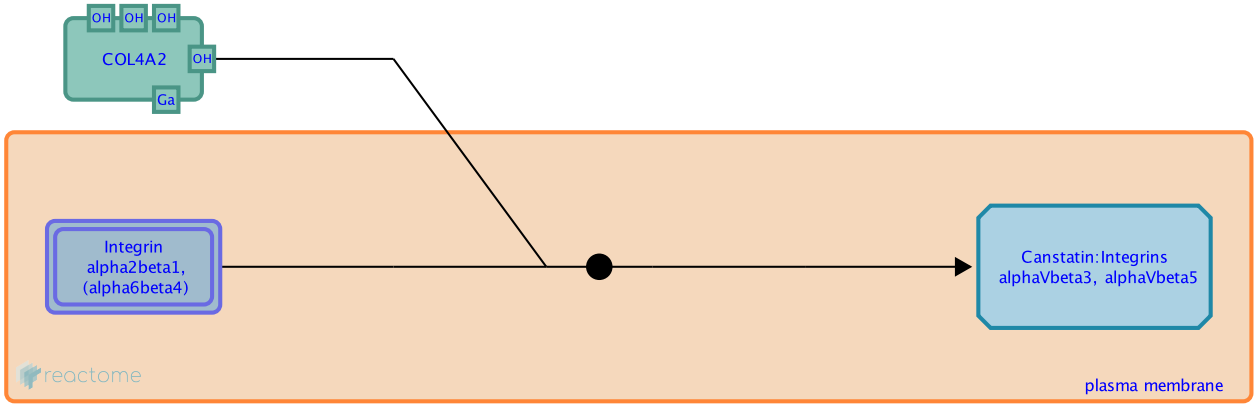
Location: Integrin cell surface interactions

Stable identifier: R-GGA-4085087

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Canstatin binds integrins alphaVbeta3, alphaVbeta5 (Homo sapiens)



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Tetrastatin binds integrin alphaVbeta3 ↗

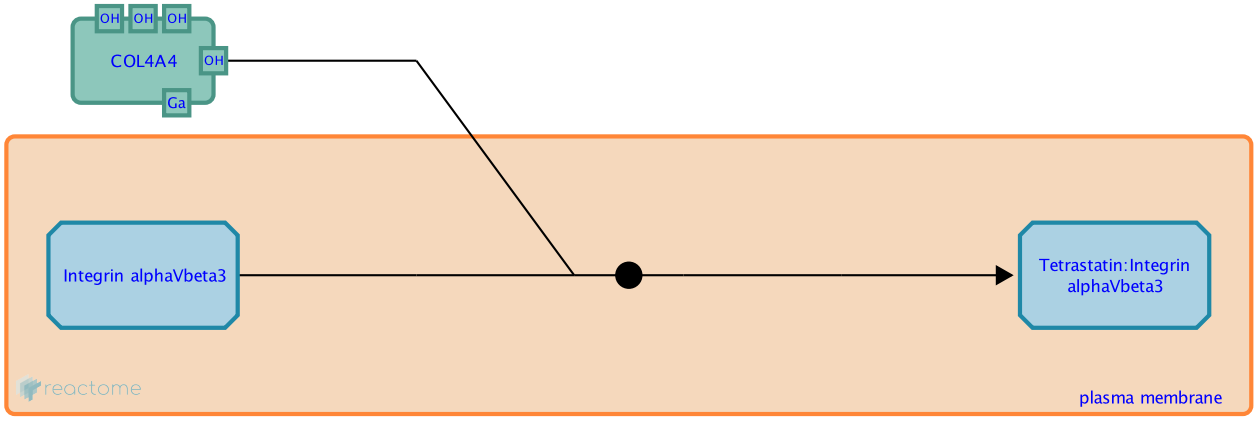
Location: Integrin cell surface interactions

Stable identifier: R-GGA-4088218

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Tetrastatin binds integrin alphaVbeta3 (Homo sapiens)



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Integrins alpha4beta1, alpha8beta1, alphaVbeta1, alphaVbeta3, alphaVbeta6 bind Fibronectin matrix ↗

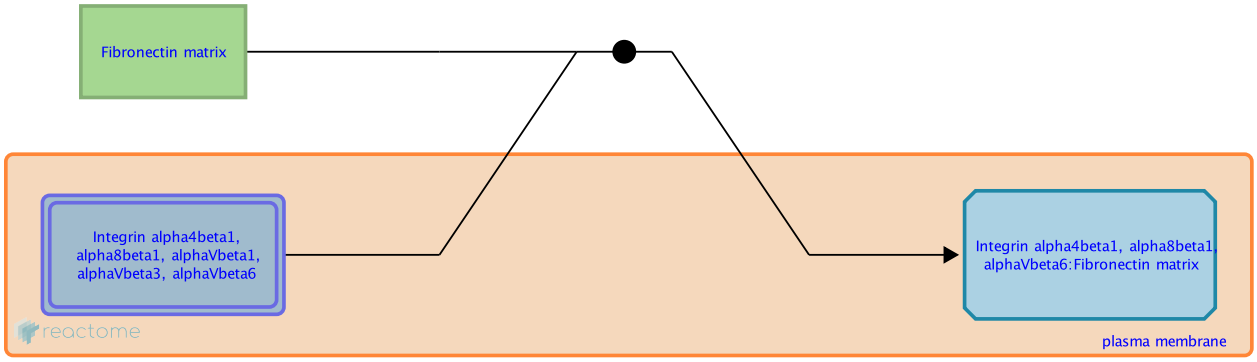
Location: Integrin cell surface interactions

Stable identifier: R-GGA-216050

Type: binding

Compartments: extracellular region, plasma membrane

Inferred from: Integrins alpha4beta1, alpha8beta1, alphaVbeta1, alphaVbeta3, alphaVbeta6 bind Fibronectin matrix (Homo sapiens)



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SPP1 (osteopontin) binds CD44 ↗

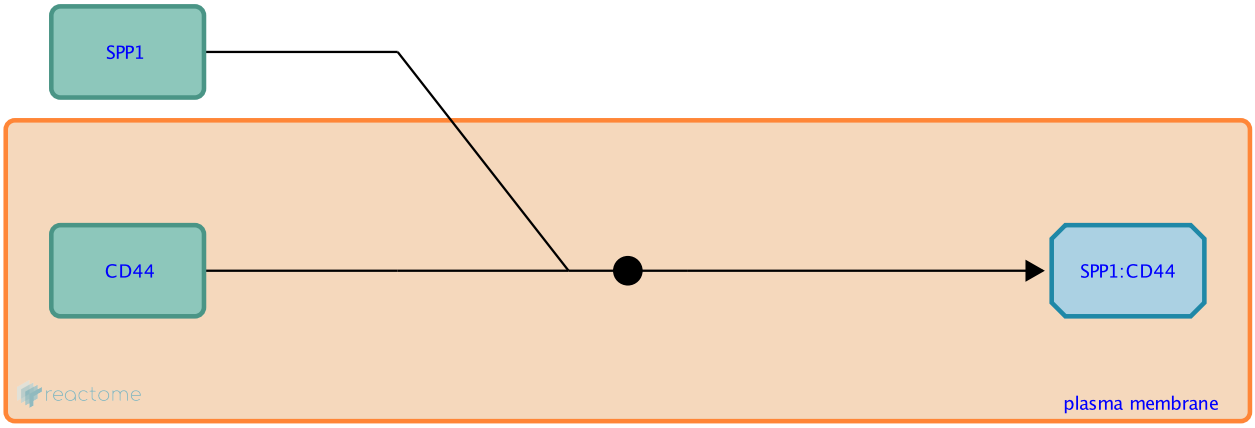
Location: Integrin cell surface interactions

Stable identifier: R-GGA-2752115

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: SPP1 (osteopontin) binds CD44 (Homo sapiens)



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VTN (vitronectin) binds Integrin alphaVbeta3, alphaVbeta5, alphaVbeta8 ↗

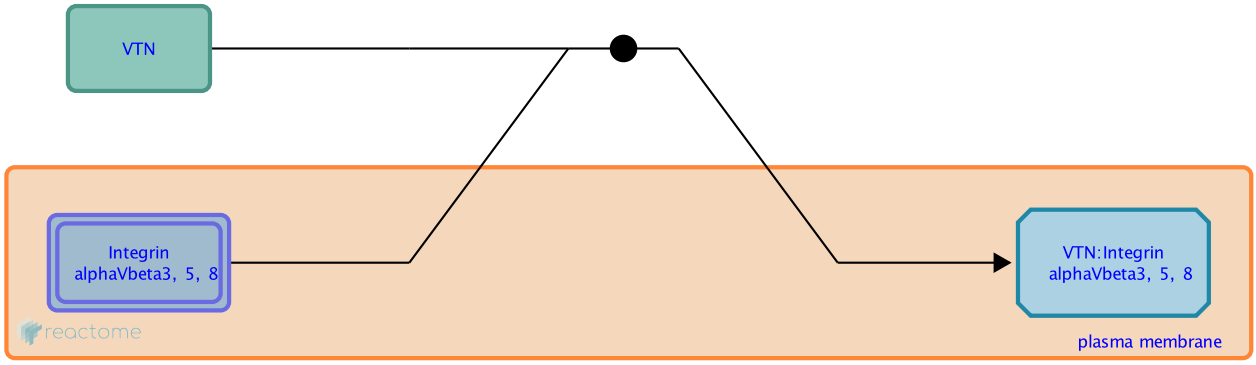
Location: Integrin cell surface interactions

Stable identifier: R-GGA-216076

Type: binding

Compartments: extracellular region, plasma membrane

Inferred from: VTN (vitronectin) binds Integrin alphaVbeta3, alphaVbeta5, alphaVbeta8 (Homo sapiens)



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Integrin alphaXbeta2 binds JAM3 ↗

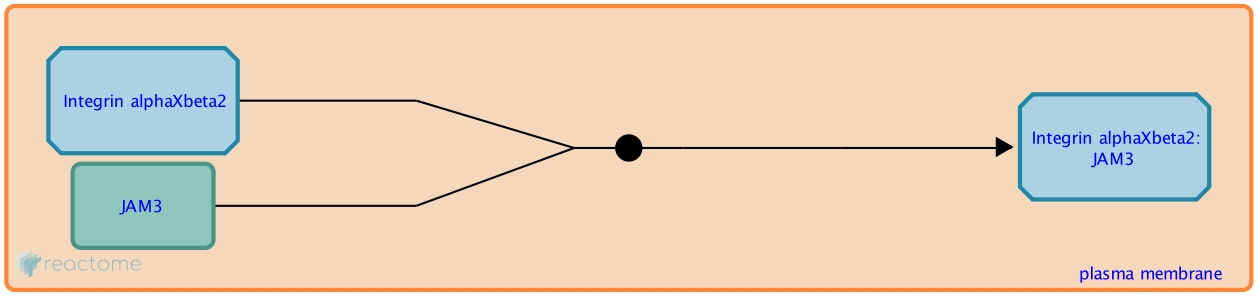
Location: Integrin cell surface interactions

Stable identifier: R-GGA-202704

Type: binding

Compartments: plasma membrane

Inferred from: Integrin alphaXbeta2 binds JAM3 (Homo sapiens)



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Integrin alphaMbeta2 (MAC1) binds JAM3 ↗

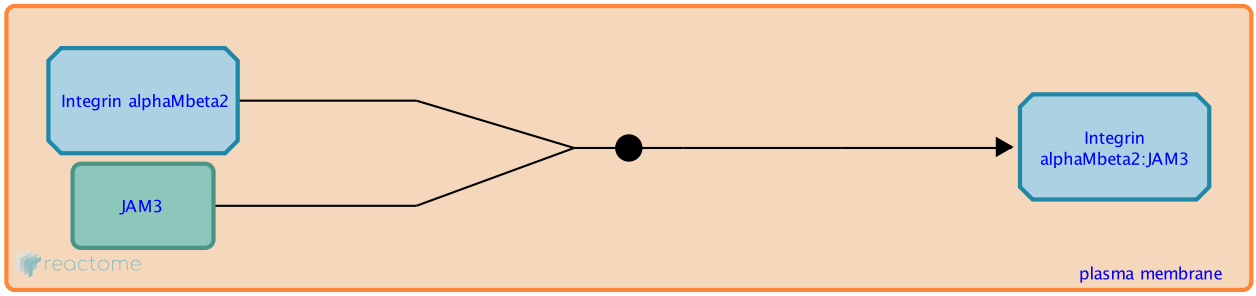
Location: Integrin cell surface interactions

Stable identifier: R-GGA-202727

Type: binding

Compartments: plasma membrane

Inferred from: Integrin alphaMbeta2 (MAC1) binds JAM3 (Homo sapiens)



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Interaction of integrin alphaVbeta3 with IPSP (Bone sialoprotein 2) ↗

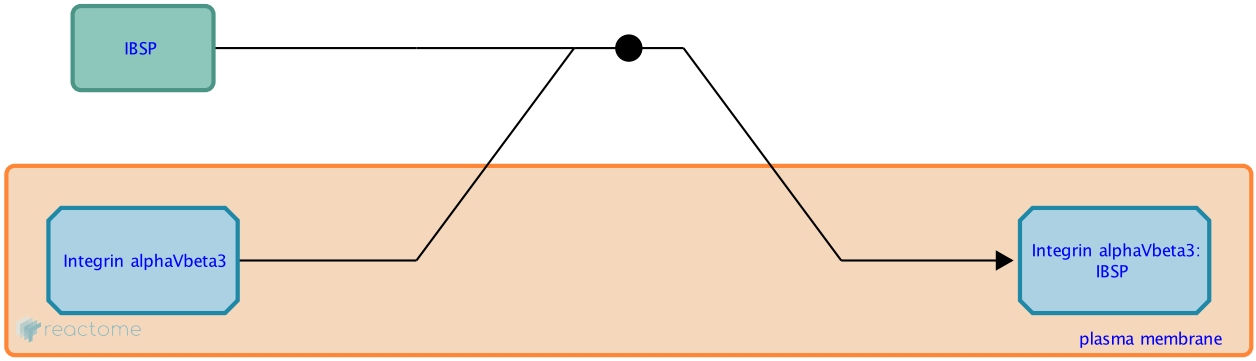
Location: Integrin cell surface interactions

Stable identifier: R-GGA-265427

Type: binding

Compartments: extracellular region, plasma membrane

Inferred from: Interaction of integrin alphaVbeta3 with IPSP (Bone sialoprotein 2) (Homo sapiens)



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<a href='/electronic_inference_compara.html' target = 'NEW'>More details and caveats of the event inference in Reactome. For details on PANTHER see also: <a href='http://www.pantherdb.org/about.jsp' target='NEW'>http://www.pantherdb.org/about.jsp

Interaction of integrin alphaVbeta3 with Tenascin ↗

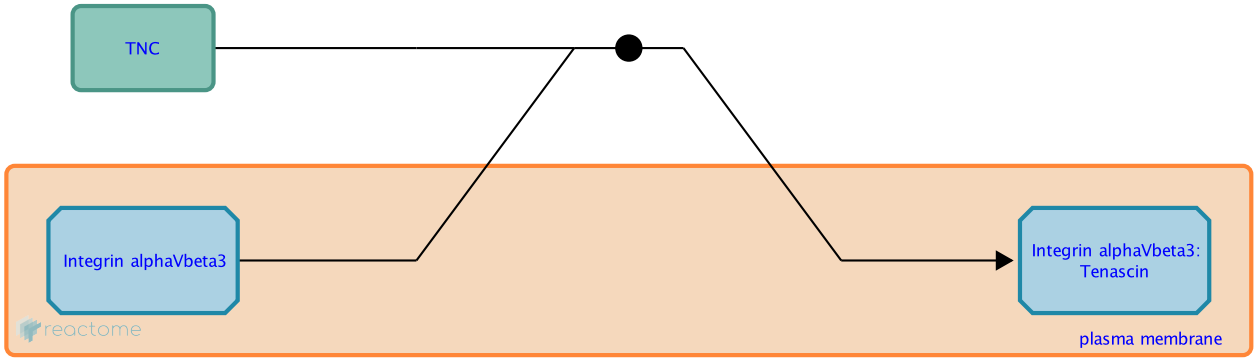
Location: Integrin cell surface interactions

Stable identifier: R-GGA-265426

Type: binding

Compartments: extracellular region, plasma membrane

Inferred from: Interaction of integrin alphaVbeta3 with Tenascin (Homo sapiens)



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Interaction of integrin alphaVbeta3 with Fibrillin ↗

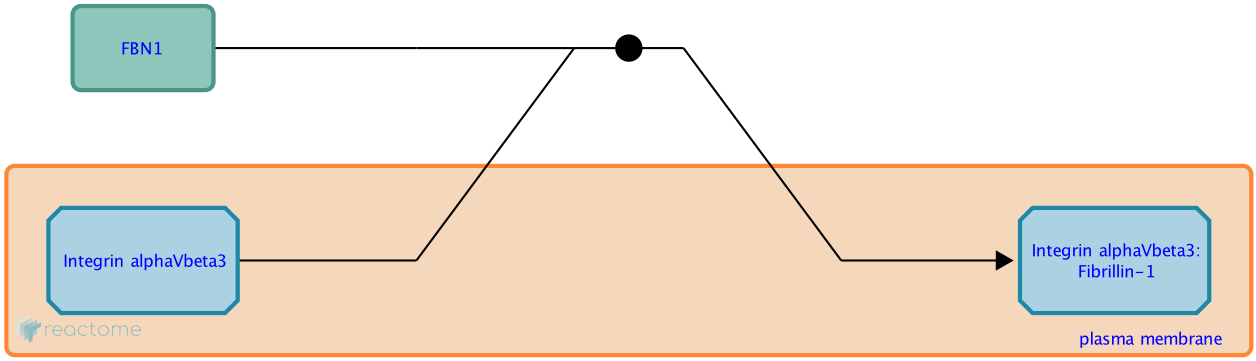
Location: Integrin cell surface interactions

Stable identifier: R-GGA-265423

Type: binding

Compartments: extracellular region, plasma membrane

Inferred from: Interaction of integrin alphaVbeta3 with Fibrillin (Homo sapiens)



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Interaction of integrin alphaVbeta3 with von Willbrand Factor ↗

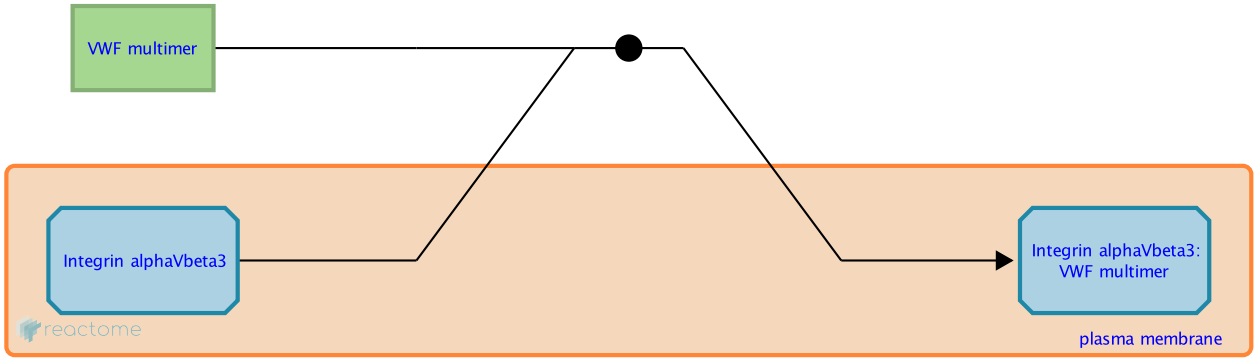
Location: Integrin cell surface interactions

Stable identifier: R-GGA-265425

Type: binding

Compartments: extracellular region, plasma membrane

Inferred from: Interaction of integrin alphaVbeta3 with von Willbrand Factor (Homo sapiens)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

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Interaction of integrin alphaVbeta3 with PECAM1 ↗

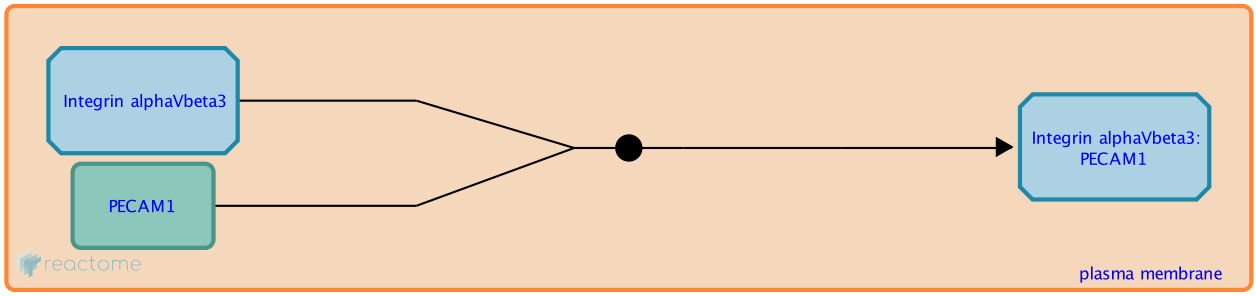
Location: Integrin cell surface interactions

Stable identifier: R-GGA-210304

Type: binding

Compartments: plasma membrane

Inferred from: Interaction of integrin alphaVbeta3 with PECAM1 (Homo sapiens)



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Interaction of integrin alphaIIbbeta3 with Fibronectin ↗

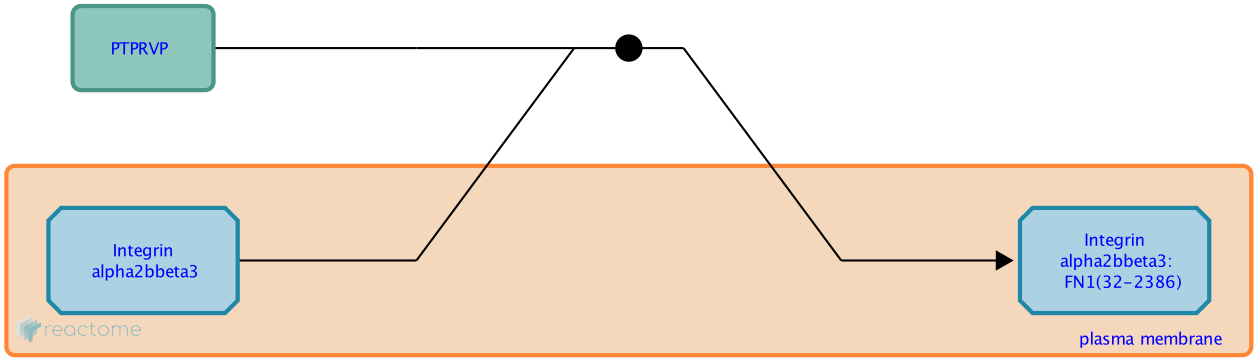
Location: Integrin cell surface interactions

Stable identifier: R-GGA-349593

Type: binding

Compartments: extracellular region, plasma membrane

Inferred from: Interaction of integrin alphaIIbbeta3 with Fibronectin (Homo sapiens)



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Interaction of integrin alphaIIbbeta3 with von Willebrand factor ↗

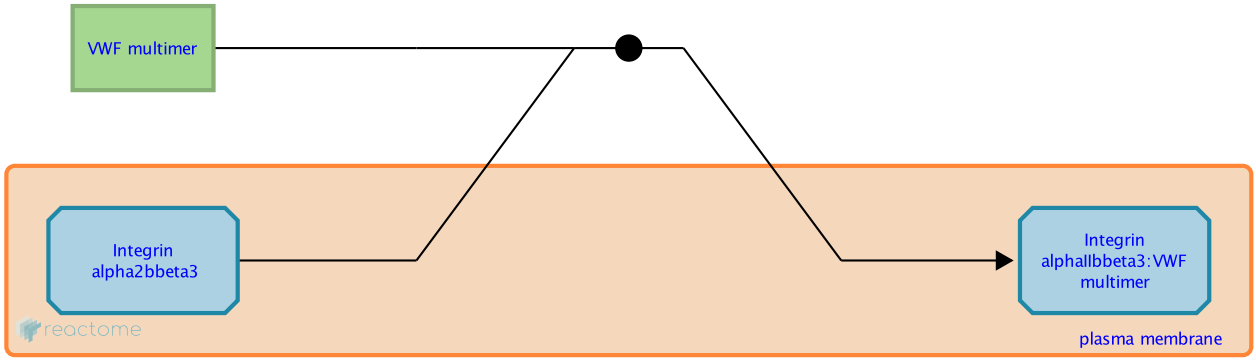
Location: Integrin cell surface interactions

Stable identifier: R-GGA-216072

Type: binding

Compartments: extracellular region, plasma membrane

Inferred from: Interaction of integrin alphaIIbbeta3 with von Willebrand factor (Homo sapiens)



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Interaction of integrin alphaIIb beta 3 with THBS1 (Thrombospondin-1) ↗

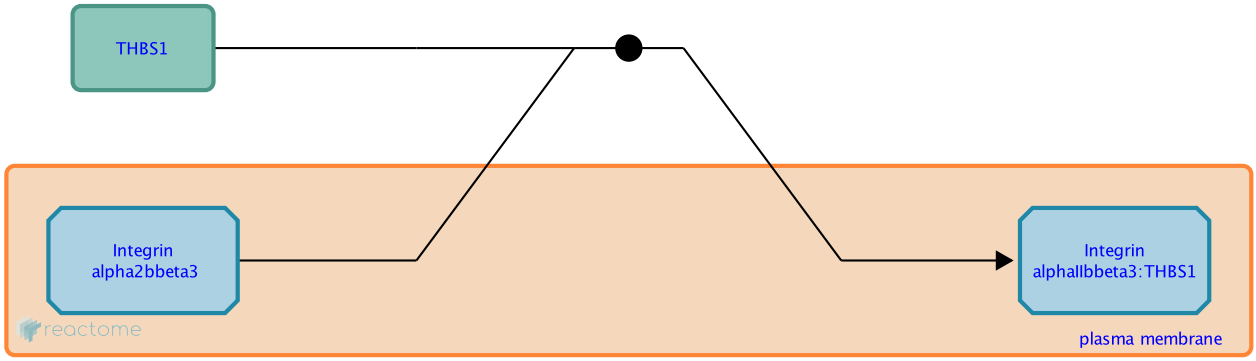
Location: Integrin cell surface interactions

Stable identifier: R-GGA-349603

Type: binding

Compartments: extracellular region, plasma membrane

Inferred from: Interaction of integrin alphaIIb beta 3 with THBS1 (Thrombospondin-1) (Homo sapiens)



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COMP binds Integrin alpha5beta1, Integrin alphaVbeta3, CD47 ↗

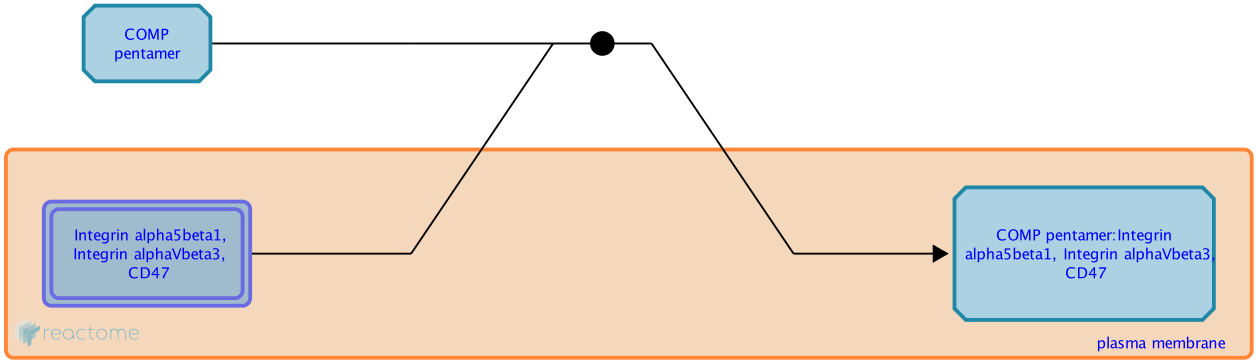
Location: Integrin cell surface interactions

Stable identifier: R-GGA-2426259

Type: binding

Compartments: extracellular region, plasma membrane

Inferred from: COMP binds Integrin alpha5beta1, Integrin alphaVbeta3, CD47 (Homo sapiens)



This event has been computationally inferred from an event that has been demonstrated in another species.

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