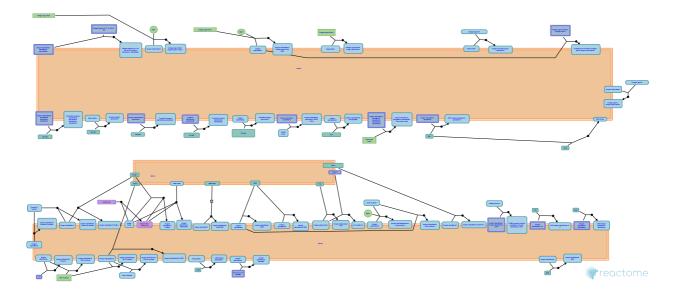


Integrin cell surface interactions



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

The contents of this document may be freely copied and distributed in any media, provided the authors, plus the institutions, are credited, as stated under the terms of <u>Creative Commons Attribution 4.0 International (CC BY 4.0)</u> <u>License</u>. For more information see our <u>license</u>.

This is just an excerpt of a full-length report for this pathway. To access the complete report, please download it at the <u>Reactome Textbook</u>.

18/05/2024

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.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

Literature references

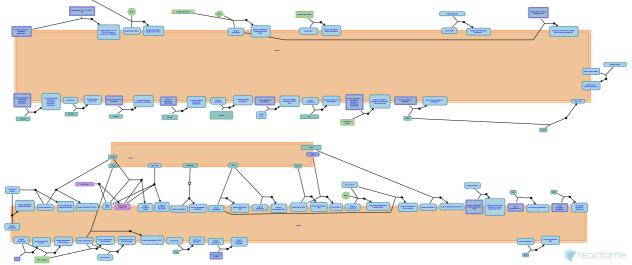
- Fabregat, A., Sidiropoulos, K., Viteri, G., Forner, O., Marin-Garcia, P., Arnau, V. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics, 18,* 142. 7
- Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. A
- 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. *オ*

This document contains 1 pathway and 42 reactions (see Table of Contents)

Integrin cell surface interactions 7

Stable identifier: R-SSC-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.

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.

Collagen types III, IV, V, VI, VIII, IX, XVI bind integrins alpha1beta1 and alpha2beta1

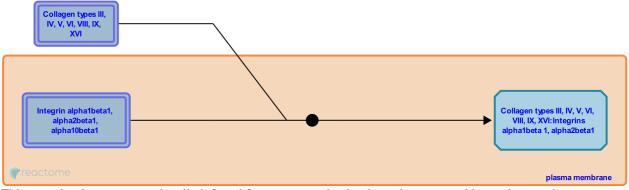
Location: Integrin cell surface interactions

Stable identifier: R-SSC-2327695

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Collagen types III, IV, V, VI, VIII, IX, XVI bind integrins alpha1beta1 and alpha2beta1 (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.

Collagen type I binds integrin alpha11beta1 7

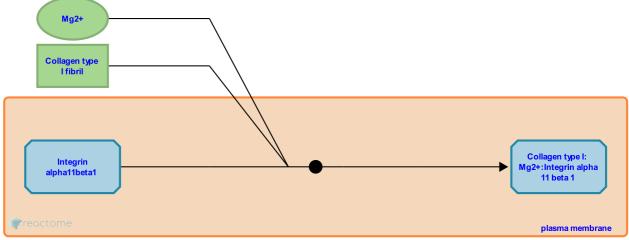
Location: Integrin cell surface interactions

Stable identifier: R-SSC-216045

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Collagen type I binds integrin alpha11beta1 (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.

Collagen type II binds integrin alpha10beta1 7

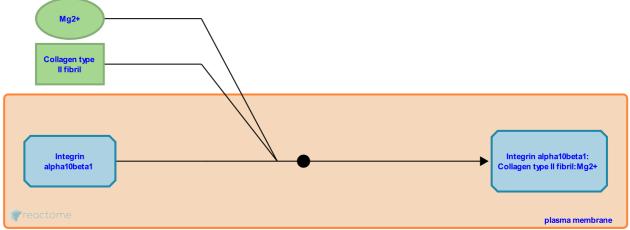
Location: Integrin cell surface interactions

Stable identifier: R-SSC-216043

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Collagen type II binds integrin alpha10beta1 (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.

Collagen type VII binds integrin alpha2beta1 7

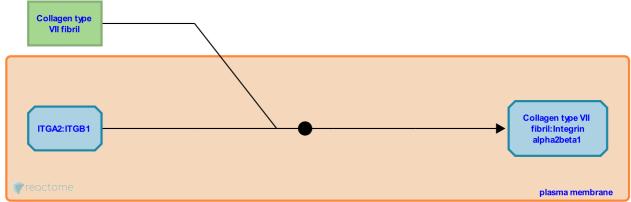
Location: Integrin cell surface interactions

Stable identifier: R-SSC-4086216

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Collagen type VII binds integrin alpha2beta1 (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.

Collagen type XIII binds Integrin alpha1beta1 7

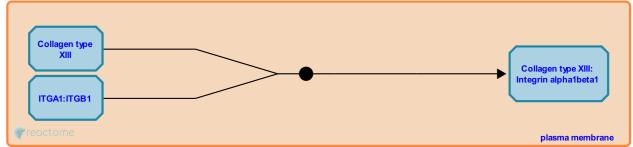
Location: Integrin cell surface interactions

Stable identifier: R-SSC-2484965

Type: binding

Compartments: plasma membrane

Inferred from: Collagen type XIII binds Integrin alpha1beta1 (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.

Collagen types VI, IX bind integrin alpha10beta1 7

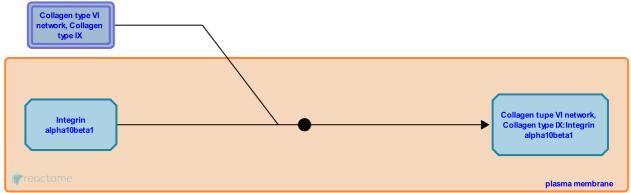
Location: Integrin cell surface interactions

Stable identifier: R-SSC-4084903

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Collagen types VI, IX bind integrin alpha10beta1 (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.

Collagen type IX binds integrin alpha11beta1 7

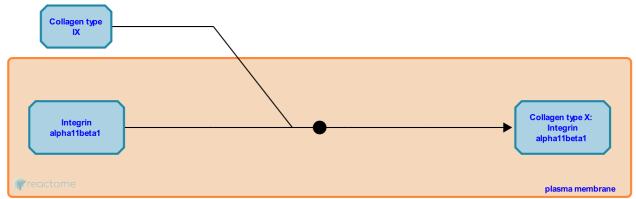
Location: Integrin cell surface interactions

Stable identifier: R-SSC-4086223

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Collagen type IX binds integrin alpha11beta1 (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.

Arresten binds integrin alpha1beta1 7

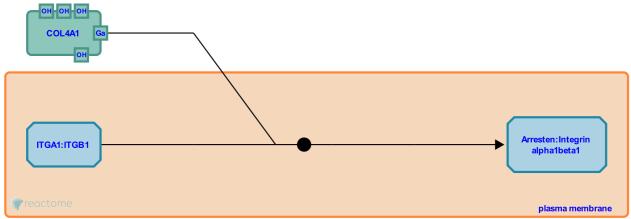
Location: Integrin cell surface interactions

Stable identifier: R-SSC-4084912

Type: binding

Compartments: plasma membrane

Inferred from: Arresten binds integrin alpha1beta1 (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.

Endostatin binds integrin alphaVbeta3, alphaVbeta5, alpha3beta1, alpha5beta1 7

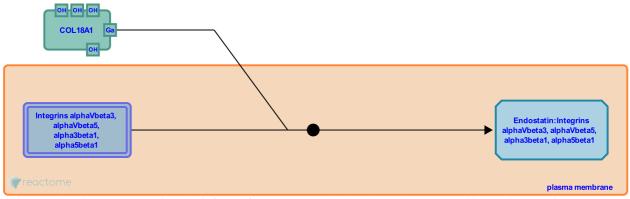
Location: Integrin cell surface interactions

Stable identifier: R-SSC-4088264

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Endostatin binds integrin alphaVbeta3, alphaVbeta5, alpha3beta1, alpha5beta1 (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.

Tumstatin binds integrin alphaVbeta 3, alpha3beta1 🛪

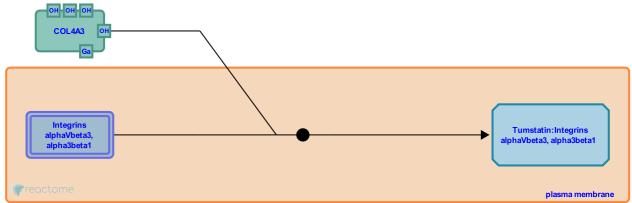
Location: Integrin cell surface interactions

Stable identifier: R-SSC-4085083

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Tumstatin binds integrin alphaVbeta 3, alpha3beta1 (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.

Canstatin binds integrins alphaVbeta3, alphaVbeta5 🛪

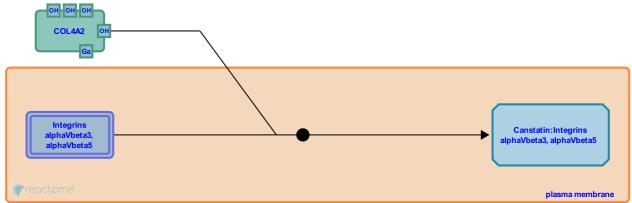
Location: Integrin cell surface interactions

Stable identifier: R-SSC-4085087

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Canstatin binds integrins alphaVbeta3, alphaVbeta5 (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.

Tetrastatin binds integrin alphaVbeta3 7

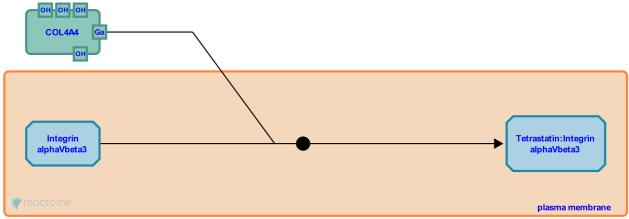
Location: Integrin cell surface interactions

Stable identifier: R-SSC-4088218

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Tetrastatin binds integrin alphaVbeta3 (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.

THBS1 (Thrombospondin-1) binds Integrin alpha3beta1, alpha4beta1 7

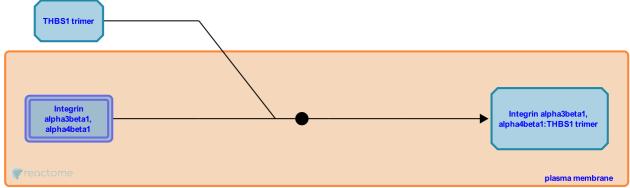
Location: Integrin cell surface interactions

Stable identifier: R-SSC-265429

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: THBS1 (Thrombospondin-1) binds Integrin alpha3beta1, alpha4beta1 (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.

Integrins alpha4beta1, alpha8beta1, alphaVbeta1, alphaVbeta3, alphaVbeta6 bind Fibronectin matrix 7

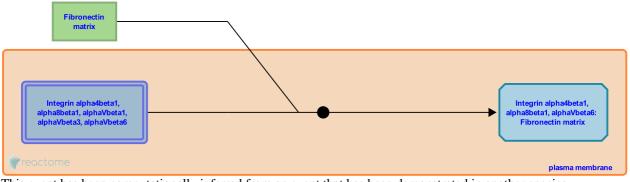
Location: Integrin cell surface interactions

Stable identifier: R-SSC-216050

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Integrins alpha4beta1, alpha8beta1, alphaVbeta1, alphaVbeta3, alphaVbeta6 bind Fibronectin matrix (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.

SPP1 (osteopontin) binds integrin alpha5beta1, alpha9beta1 7

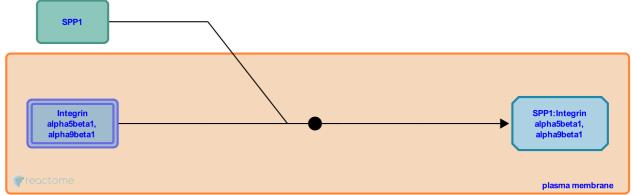
Location: Integrin cell surface interactions

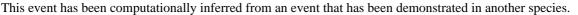
Stable identifier: R-SSC-265424

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: SPP1 (osteopontin) binds integrin alpha5beta1, alpha9beta1 (Homo sapiens)





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.

SPP1 (osteopontin) binds CD44 7

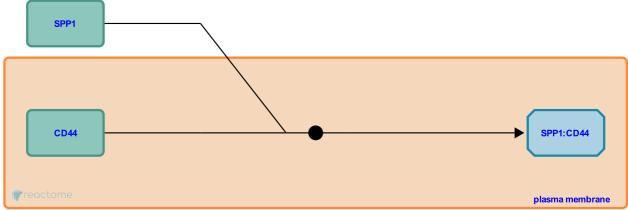
Location: Integrin cell surface interactions

Stable identifier: R-SSC-2752115

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: SPP1 (osteopontin) binds CD44 (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.

VCAM1 binds Integrin alpha4beta1 7

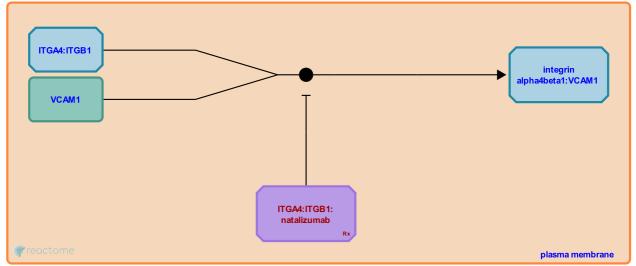
Location: Integrin cell surface interactions

Stable identifier: R-SSC-198941

Type: binding

Compartments: plasma membrane

Inferred from: VCAM1 binds Integrin alpha4beta1 (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.

Integrin alpha4beta1 binds JAM2:JAM3 7

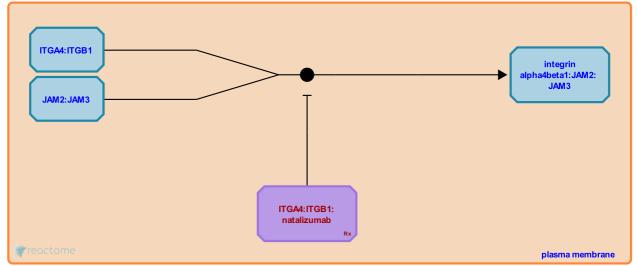
Location: Integrin cell surface interactions

Stable identifier: R-SSC-202706

Type: binding

Compartments: plasma membrane

Inferred from: Integrin alpha4beta1 binds JAM2:JAM3 (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.

ITGA4:ITGB1 binds natalizumab 7

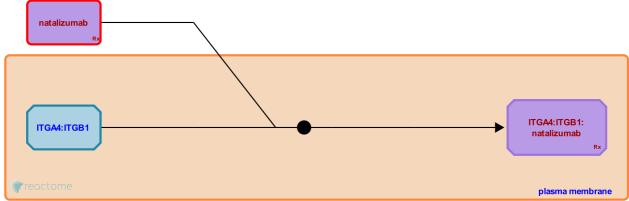
Location: Integrin cell surface interactions

Stable identifier: R-SSC-9679740

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: ITGA4:ITGB1 binds natalizumab (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.

MADCAM1-1 binds Integrin alpha4beta7 7

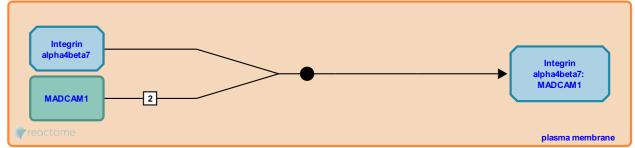
Location: Integrin cell surface interactions

Stable identifier: R-SSC-199032

Type: binding

Compartments: plasma membrane

Inferred from: MADCAM1-1 binds Integrin alpha4beta7 (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.

Interaction of integrin alpha8beta1 with Tenascin-C 7

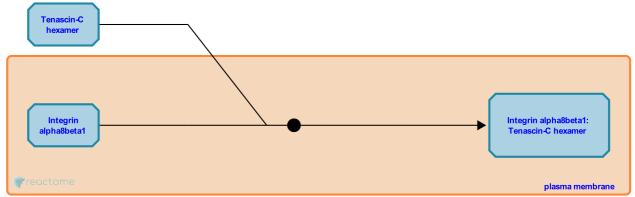
Location: Integrin cell surface interactions

Stable identifier: R-SSC-216064

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Interaction of integrin alpha8beta1 with Tenascin-C (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.

Interaction of integrin alpha9beta1 with VCAM1 7

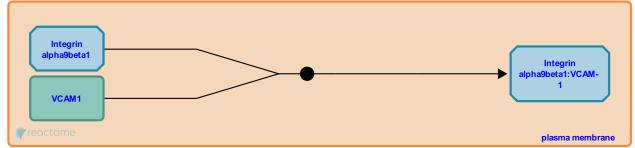
Location: Integrin cell surface interactions

Stable identifier: R-SSC-265428

Type: binding

Compartments: plasma membrane

Inferred from: Interaction of integrin alpha9beta1 with VCAM1 (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.

Interaction of integrin alpha9beta1 with Tenascin-C 7

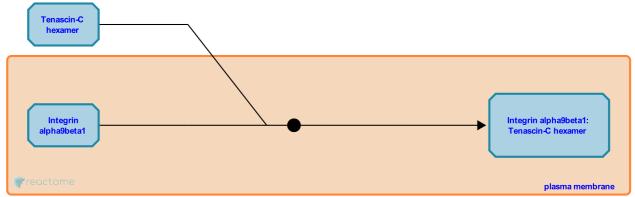
Location: Integrin cell surface interactions

Stable identifier: R-SSC-216068

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Interaction of integrin alpha9beta1 with Tenascin-C (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.

Interaction of integrin alphaDbeta2 with fibrin 7

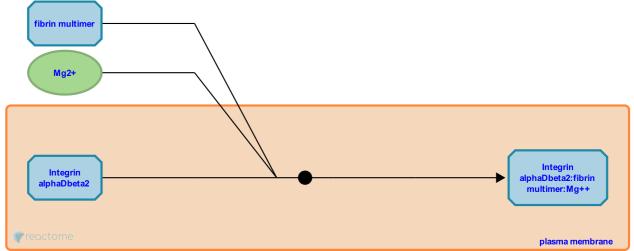
Location: Integrin cell surface interactions

Stable identifier: R-SSC-216069

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Interaction of integrin alphaDbeta2 with fibrin (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.

Interaction of integrin alphaXbeta2 with fibrin 7

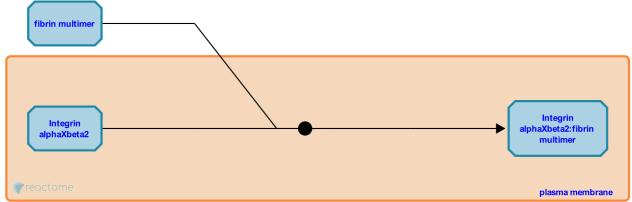
Location: Integrin cell surface interactions

Stable identifier: R-SSC-216082

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Interaction of integrin alphaXbeta2 with fibrin (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.

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

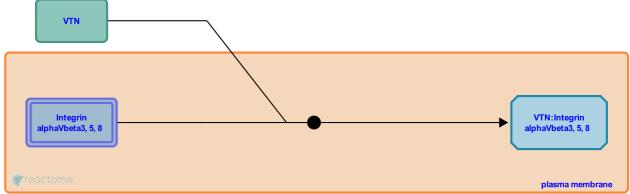
Location: Integrin cell surface interactions

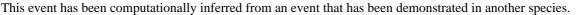
Stable identifier: R-SSC-216076

Type: binding

Compartments: plasma membrane, extracellular region

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





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.

Integrin alphaXbeta2 binds JAM3 7

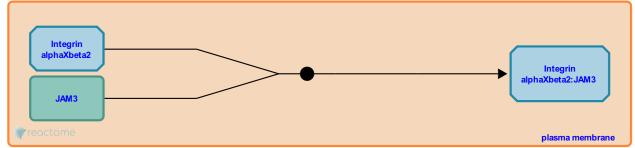
Location: Integrin cell surface interactions

Stable identifier: R-SSC-202704

Type: binding

Compartments: plasma membrane

Inferred from: Integrin alphaXbeta2 binds JAM3 (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.

ICAM1-5 bind Integrin alphaLbeta2 (LFA-1) 7

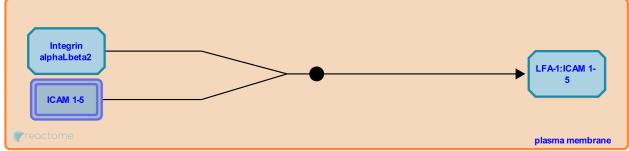
Location: Integrin cell surface interactions

Stable identifier: R-SSC-199050

Type: binding

Compartments: plasma membrane

Inferred from: ICAM1-5 bind Integrin alphaLbeta2 (LFA-1) (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.

Integrin alphaLbeta2 (LFA-1) binds F11R (JAM-A) 7

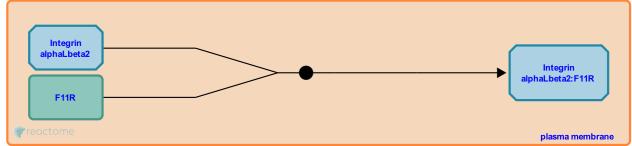
Location: Integrin cell surface interactions

Stable identifier: R-SSC-202718

Type: binding

Compartments: plasma membrane

Inferred from: Integrin alphaLbeta2 (LFA-1) binds F11R (JAM-A) (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.

Integrin alphaMbeta2 (MAC1) binds JAM3 7

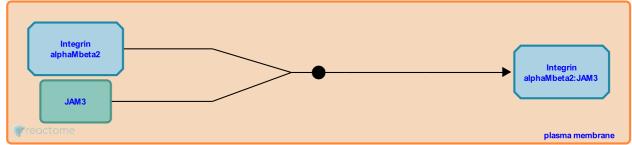
Location: Integrin cell surface interactions

Stable identifier: R-SSC-202727

Type: binding

Compartments: plasma membrane

Inferred from: Integrin alphaMbeta2 (MAC1) binds JAM3 (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.

BSG (basigin) binds Integrin alpha3beta1, alpha6beta1 7

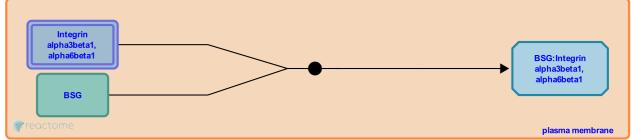
Location: Integrin cell surface interactions

Stable identifier: R-SSC-204434

Type: binding

Compartments: plasma membrane

Inferred from: BSG (basigin) binds Integrin alpha3beta1, alpha6beta1 (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.

Interaction of integrin alphaVbeta3 with IPSP (Bone sialoprotein 2) 7

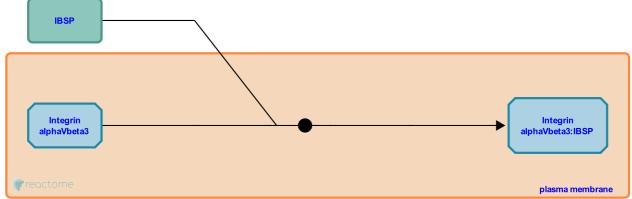
Location: Integrin cell surface interactions

Stable identifier: R-SSC-265427

Type: binding

Compartments: plasma membrane, extracellular region

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

Interaction of integrin alphaVbeta3 with Tenascin 7

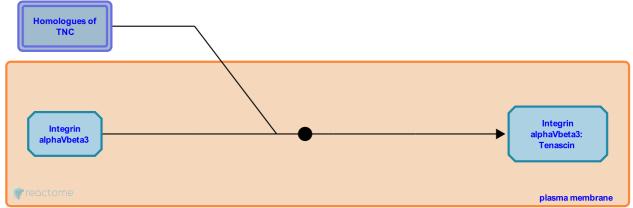
Location: Integrin cell surface interactions

Stable identifier: R-SSC-265426

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Interaction of integrin alphaVbeta3 with Tenascin (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.

Interaction of integrin alphaVbeta3 with von Willbrand Factor 7

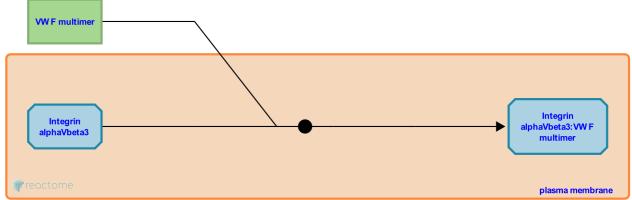
Location: Integrin cell surface interactions

Stable identifier: R-SSC-265425

Type: binding

Compartments: plasma membrane, extracellular region

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.

Interaction of integrin alphaVbeta3 with PECAM1 7

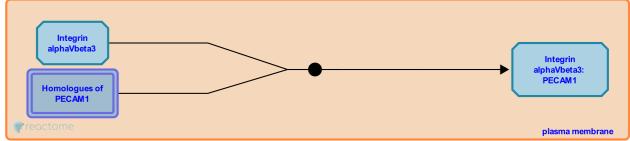
Location: Integrin cell surface interactions

Stable identifier: R-SSC-210304

Type: binding

Compartments: plasma membrane

Inferred from: Interaction of integrin alphaVbeta3 with PECAM1 (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.

Interaction of integrin alphaEbeta7 with Cadherin-1 7

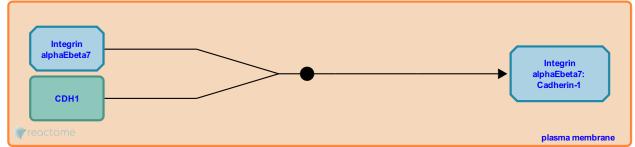
Location: Integrin cell surface interactions

Stable identifier: R-SSC-265422

Type: binding

Compartments: plasma membrane

Inferred from: Interaction of integrin alphaEbeta7 with Cadherin-1 (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.

Interaction of integrin alphaIIbbeta3 with Fibronectin 7

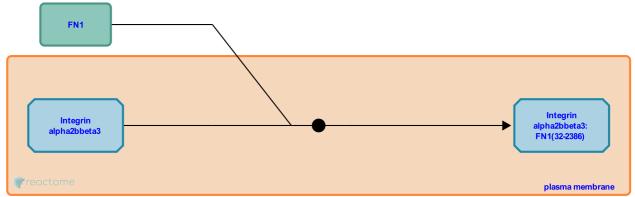
Location: Integrin cell surface interactions

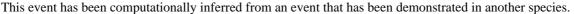
Stable identifier: R-SSC-349593

Type: binding

Compartments: plasma membrane, extracellular region

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





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.

Adhesion of integrin alphaIIbbeta3 to fibrin network 7

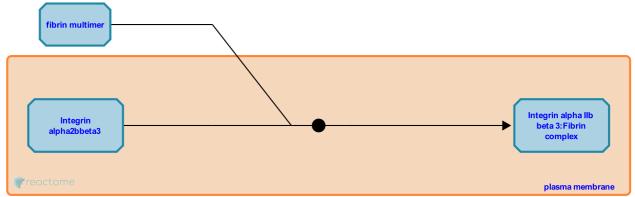
Location: Integrin cell surface interactions

Stable identifier: R-SSC-114560

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Adhesion of integrin alphaIIbbeta3 to fibrin network (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.

Interaction of integrin alphaIIbbeta3 with von Willebrand factor 7

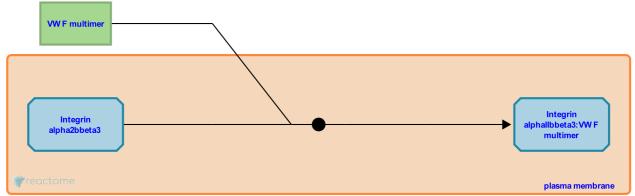
Location: Integrin cell surface interactions

Stable identifier: R-SSC-216072

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Interaction of integrin alphaIIbbeta3 with von Willebrand 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.

Interaction of integrin alphaIIb beta 3 with THBS1 (Thrombospondin-1) 7

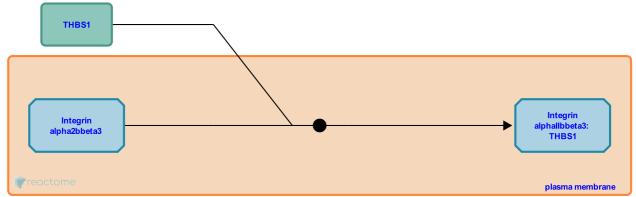
Location: Integrin cell surface interactions

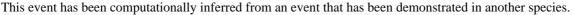
Stable identifier: R-SSC-349603

Type: binding

Compartments: plasma membrane, extracellular region

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





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.

LUM (lumican) binds integrin alpha2beta1 7

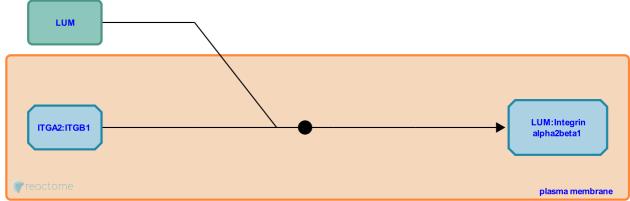
Location: Integrin cell surface interactions

Stable identifier: R-SSC-4085133

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: LUM (lumican) binds integrin alpha2beta1 (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.

COMP binds Integrin alpha5beta1, Integrin alphaVbeta3, CD47 7

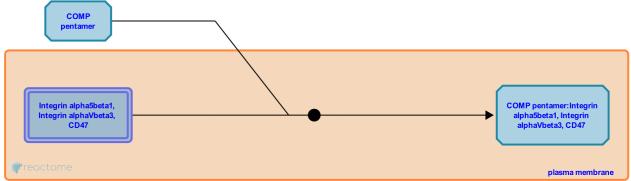
Location: Integrin cell surface interactions

Stable identifier: R-SSC-2426259

Type: binding

Compartments: plasma membrane, extracellular region

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.

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.

Table of Contents

	oduction	1 2
	ntegrin cell surface interactions	3
	Collagen types III, IV, V, VI, VIII, IX, XVI bind integrins alpha1beta1 and alpha2beta1	4
	Collagen type I binds integrin alpha11beta1	5
	Collagen type II binds integrin alpha10beta1	6
	Collagen type VII binds integrin alpha2beta1	7
	Collagen type XIII binds Integrin alpha1beta1	8
	Collagen types VI, IX bind integrin alpha10beta1	° 9
	Collagen type IX binds integrin alpha11beta1	
	Arresten binds integrin alpha1beta1	10
	Endostatin binds integrin alphaVbeta3, alphaVbeta5, alpha3beta1, alpha5beta1	11
	Tumstatin binds integrin alphaVbeta 3, alpha3beta1	12
	Canstatin binds integrins alphaVbeta3, alphaVbeta5	13
⊬	Tetrastatin binds integrin alphaVbeta3	14
≻	THBS1 (Thrombospondin-1) binds Integrin alpha3beta1, alpha4beta1	15
⊬	Integrins alpha4beta1, alpha8beta1, alphaVbeta1, alphaVbeta3, alphaVbeta6 bind Fibronectin matrix	16
⊬	SPP1 (osteopontin) binds integrin alpha5beta1, alpha9beta1	17
⊬	SPP1 (osteopontin) binds CD44	18
	SPP1 (osteopontin) binds CD44 VCAM1 binds Integrin alpha4beta1	18 19
₽		
}• }•	VCAM1 binds Integrin alpha4beta1	19
ን• ን• ን•	VCAM1 binds Integrin alpha4beta1 Integrin alpha4beta1 binds JAM2:JAM3	19 20
ን ን ን ን	VCAM1 binds Integrin alpha4beta1 Integrin alpha4beta1 binds JAM2:JAM3 ITGA4:ITGB1 binds natalizumab	19 20 21
ት ት ት ት	 VCAM1 binds Integrin alpha4beta1 Integrin alpha4beta1 binds JAM2:JAM3 ITGA4:ITGB1 binds natalizumab MADCAM1-1 binds Integrin alpha4beta7 	19 20 21 22
ት ት ት ት ት ት	 VCAM1 binds Integrin alpha4beta1 Integrin alpha4beta1 binds JAM2:JAM3 ITGA4:ITGB1 binds natalizumab MADCAM1-1 binds Integrin alpha4beta7 Interaction of integrin alpha8beta1 with Tenascin-C 	19 20 21 22 23
ት ት ት ት ት ት ት	 VCAM1 binds Integrin alpha4beta1 Integrin alpha4beta1 binds JAM2:JAM3 ITGA4:ITGB1 binds natalizumab MADCAM1-1 binds Integrin alpha4beta7 Interaction of integrin alpha8beta1 with Tenascin-C Interaction of integrin alpha9beta1 with VCAM1 	19 20 21 22 23 24
> > > > > > > > > > > > > >	 VCAM1 binds Integrin alpha4beta1 Integrin alpha4beta1 binds JAM2:JAM3 ITGA4:ITGB1 binds natalizumab MADCAM1-1 binds Integrin alpha4beta7 Interaction of integrin alpha8beta1 with Tenascin-C Interaction of integrin alpha9beta1 with Tenascin-C Interaction of integrin alpha9beta1 with Tenascin-C 	 19 20 21 22 23 24 25
* * * * * * * * * *	 VCAM1 binds Integrin alpha4beta1 Integrin alpha4beta1 binds JAM2:JAM3 ITGA4:ITGB1 binds natalizumab MADCAM1-1 binds Integrin alpha4beta7 Interaction of integrin alpha8beta1 with Tenascin-C Interaction of integrin alpha9beta1 with VCAM1 Interaction of integrin alpha9beta1 with Tenascin-C Interaction of integrin alpha9beta1 with Tenascin-C Interaction of integrin alpha9beta1 with Tenascin-C 	 19 20 21 22 23 24 25 26
* * * * * * * * * * * * * *	 VCAM1 binds Integrin alpha4beta1 Integrin alpha4beta1 binds JAM2:JAM3 ITGA4:ITGB1 binds natalizumab MADCAM1-1 binds Integrin alpha4beta7 Interaction of integrin alpha8beta1 with Tenascin-C Interaction of integrin alpha9beta1 with VCAM1 Interaction of integrin alpha9beta1 with Tenascin-C Interaction of integrin alpha9beta2 with fibrin Interaction of integrin alphaXbeta2 with fibrin 	 19 20 21 22 23 24 25 26 27
* * * * * * * * * * * * * * *	 VCAM1 binds Integrin alpha4beta1 Integrin alpha4beta1 binds JAM2:JAM3 ITGA4:ITGB1 binds natalizumab MADCAM1-1 binds Integrin alpha4beta7 Interaction of integrin alpha8beta1 with Tenascin-C Interaction of integrin alpha9beta1 with VCAM1 Interaction of integrin alpha9beta1 with Tenascin-C Interaction of integrin alpha9beta2 with fibrin Interaction of integrin alphaXbeta2 with fibrin VTN (vitronectin) binds Integrin alphaVbeta3, alphaVbeta5, alphaVbeta8 	 19 20 21 22 23 24 25 26 27 28
* * * * * * * * * * * * * * * * *	 VCAM1 binds Integrin alpha4beta1 Integrin alpha4beta1 binds JAM2:JAM3 ITGA4:ITGB1 binds natalizumab MADCAM1-1 binds Integrin alpha4beta7 Interaction of integrin alpha8beta1 with Tenascin-C Interaction of integrin alpha9beta1 with VCAM1 Interaction of integrin alpha9beta1 with Tenascin-C Interaction of integrin alpha9beta2 with fibrin Interaction of integrin alphaXbeta2 with fibrin VTN (vitronectin) binds Integrin alphaVbeta3, alphaVbeta5, alphaVbeta8 Integrin alphaXbeta2 binds JAM3 	 19 20 21 22 23 24 25 26 27 28 29
* * * * * * * * * * * * * * * * * *	 VCAM1 binds Integrin alpha4beta1 Integrin alpha4beta1 binds JAM2:JAM3 ITGA4:ITGB1 binds natalizumab MADCAM1-1 binds Integrin alpha4beta7 Interaction of integrin alpha8beta1 with Tenascin-C Interaction of integrin alpha9beta1 with VCAM1 Interaction of integrin alpha9beta1 with Tenascin-C Interaction of integrin alpha9beta2 with fibrin Interaction of integrin alpha2beta2 with fibrin VTN (vitronectin) binds Integrin alphaVbeta3, alphaVbeta5, alphaVbeta8 Integrin alphaXbeta2 binds JAM3 ICAM1-5 bind Integrin alphaLbeta2 (LFA-1) 	 19 20 21 22 23 24 25 26 27 28 29 30
* * * * * * * * * * * * * * * * * * *	 VCAM1 binds Integrin alpha4beta1 Integrin alpha4beta1 binds JAM2:JAM3 ITGA4:ITGB1 binds natalizumab MADCAM1-1 binds Integrin alpha4beta7 Interaction of integrin alpha8beta1 with Tenascin-C Interaction of integrin alpha9beta1 with VCAM1 Interaction of integrin alpha9beta1 with Tenascin-C Interaction of integrin alpha9beta2 with fibrin Interaction of integrin alphaXbeta2 with fibrin VTN (vitronectin) binds Integrin alphaVbeta3, alphaVbeta5, alphaVbeta8 Integrin alphaXbeta2 binds JAM3 ICAM1-5 bind Integrin alphaLbeta2 (LFA-1) Integrin alphaLbeta2 (LFA-1) binds F11R (JAM-A) 	 19 20 21 22 23 24 25 26 27 28 29 30 31

:	Interaction of integrin alphaVbeta3 with Tenascin	35
:	Interaction of integrin alphaVbeta3 with von Willbrand Factor	36
:	Interaction of integrin alphaVbeta3 with PECAM1	37
	Interaction of integrin alphaEbeta7 with Cadherin-1	38
:	Interaction of integrin alphaIIbbeta3 with Fibronectin	39
	Adhesion of integrin alphaIIbbeta3 to fibrin network	40
	Interaction of integrin alphaIIbbeta3 with von Willebrand factor	41
:	Interaction of integrin alphaIIb beta 3 with THBS1 (Thrombospondin-1)	42
:	LUM (lumican) binds integrin alpha2beta1	43
:	COMP binds Integrin alpha5beta1, Integrin alphaVbeta3, CD47	44
Tał	ble of Contents	45