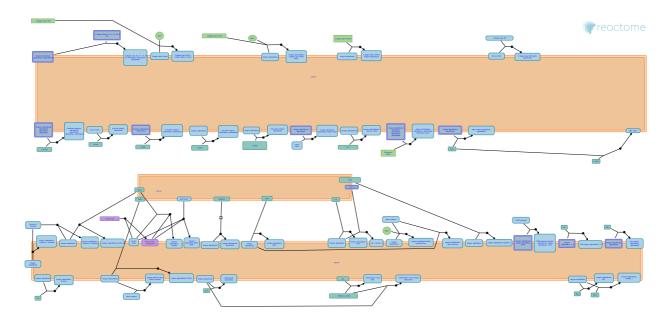


Integrin cell surface interactions



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 Creative Commons Attribution 4.0 International (CC BY 4.0) License. For more information see our license.

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.

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 data-base: Efficient access to complex pathway data. *PLoS computational biology, 14*, e1005968.

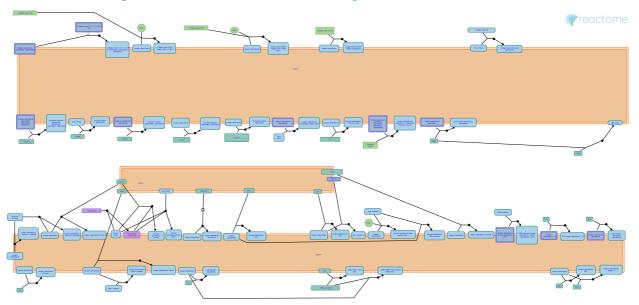
Reactome database release: 77

This document contains 1 pathway and 39 reactions (see Table of Contents)

Integrin cell surface interactions ↗

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

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

7

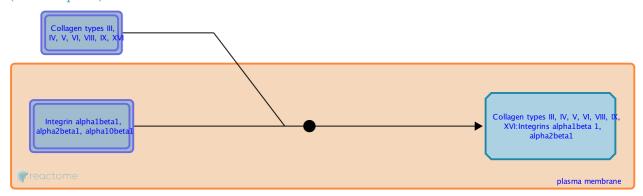
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Collagen type I binds integrin alpha11beta1 →

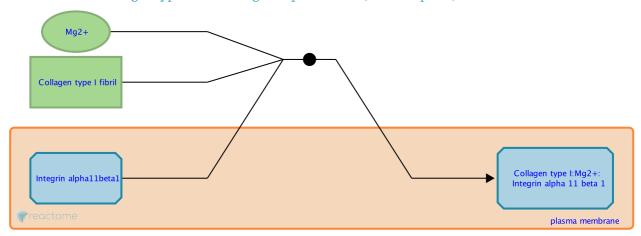
Location: Integrin cell surface interactions

Stable identifier: R-RNO-216045

Type: binding

Compartments: extracellular region, plasma membrane

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Collagen type II binds integrin alpha10beta1 →

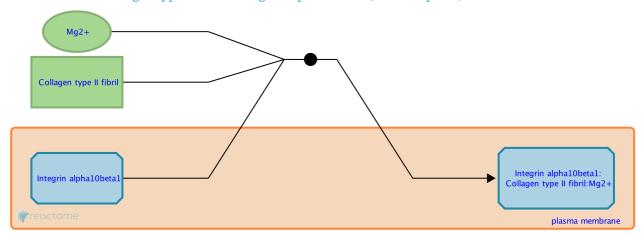
Location: Integrin cell surface interactions

Stable identifier: R-RNO-216043

Type: binding

Compartments: extracellular region, plasma membrane

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Collagen type VII binds integrin alpha2beta1 7

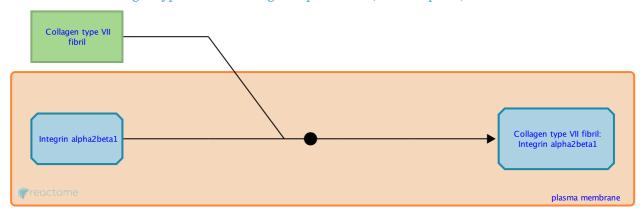
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Collagen type XIII binds Integrin alpha1beta1 🗷

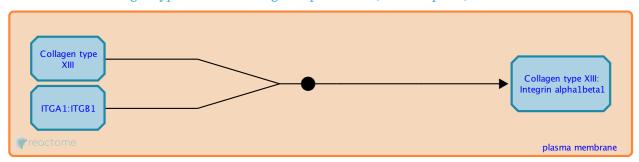
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Arresten binds integrin alpha1beta1 对

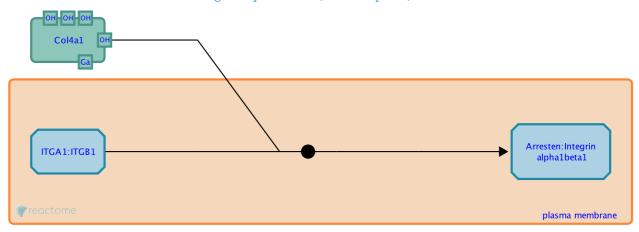
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Endostatin binds integrin alphaVbeta3, alphaVbeta5, alpha3beta1, alpha5beta1 >

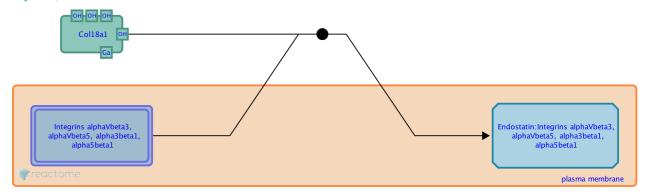
Location: Integrin cell surface interactions

Stable identifier: R-RNO-4088264

Type: binding

Compartments: extracellular region, plasma membrane

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Tumstatin binds integrin alphaVbeta 3, alpha3beta1 7

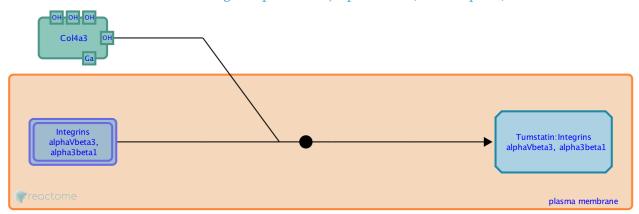
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Canstatin binds integrins alphaVbeta3, alphaVbeta5 🗷

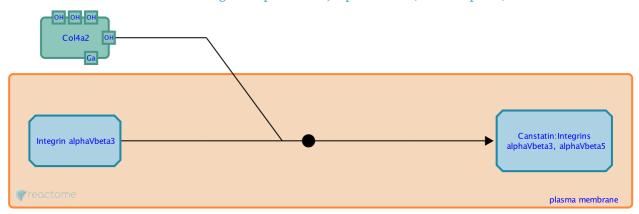
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Tetrastatin binds integrin alphaVbeta3 →

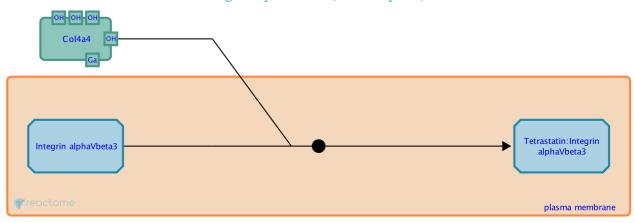
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

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

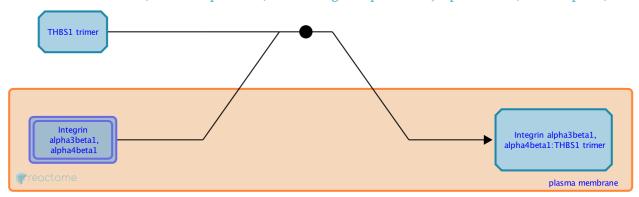
Location: Integrin cell surface interactions

Stable identifier: R-RNO-265429

Type: binding

Compartments: extracellular region, plasma membrane

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

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

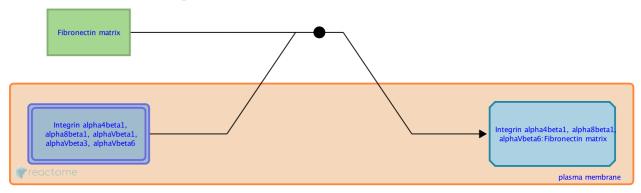
Location: Integrin cell surface interactions

Stable identifier: R-RNO-216050

Type: binding

Compartments: extracellular region, plasma membrane

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

SPP1 (osteopontin) binds integrin alpha5beta1, alpha9beta1 7

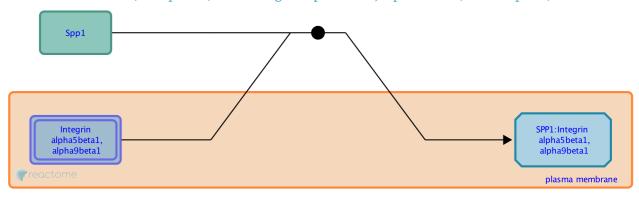
Location: Integrin cell surface interactions

Stable identifier: R-RNO-265424

Type: binding

Compartments: extracellular region, plasma membrane

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

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

SPP1 (osteopontin) binds CD44 **↗**

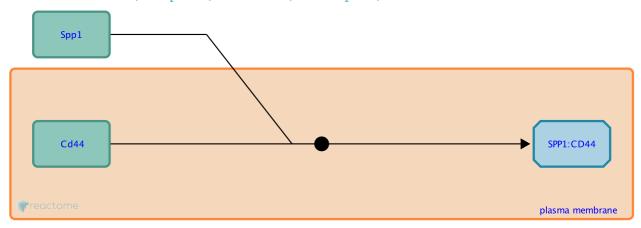
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

VCAM1 binds Integrin alpha4beta1 **对**

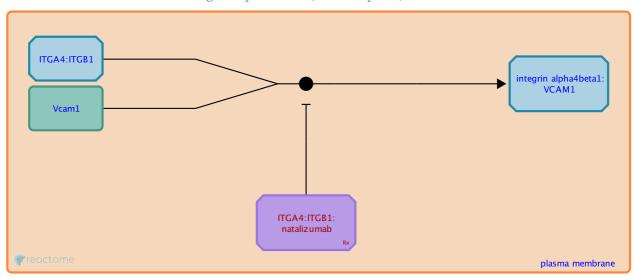
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Integrin alpha4beta1 binds JAM2:JAM3 >

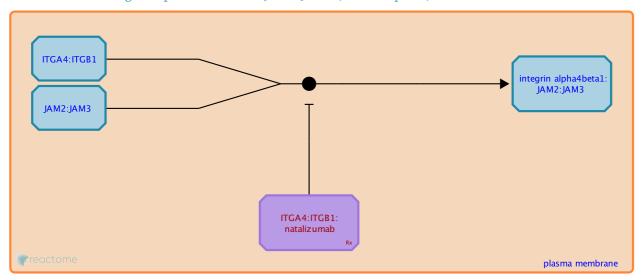
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

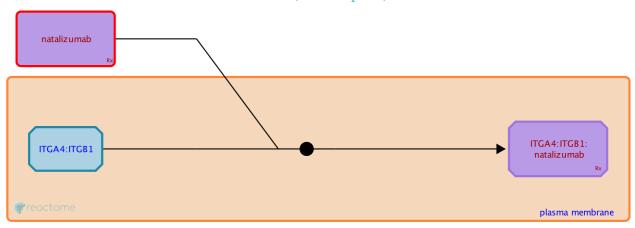
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

MADCAM1-1 binds Integrin alpha4beta7 →

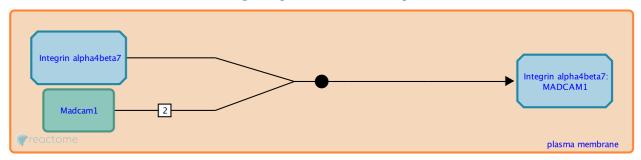
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Interaction of integrin alpha8beta1 with Tenascin-C 7

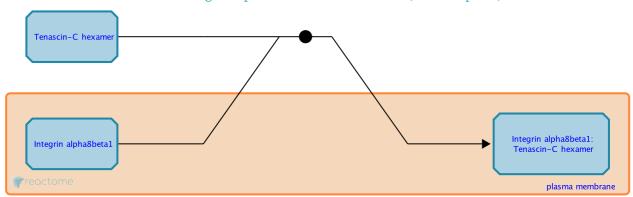
Location: Integrin cell surface interactions

Stable identifier: R-RNO-216064

Type: binding

Compartments: extracellular region, plasma membrane

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Interaction of integrin alpha9beta1 with VCAM1 >

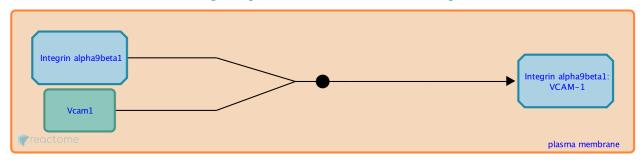
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Interaction of integrin alpha9beta1 with Tenascin-C 7

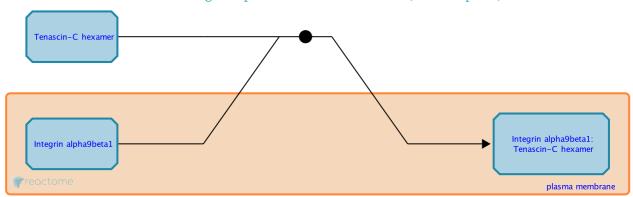
Location: Integrin cell surface interactions

Stable identifier: R-RNO-216068

Type: binding

Compartments: extracellular region, plasma membrane

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Interaction of integrin alphaDbeta2 with fibrin 7

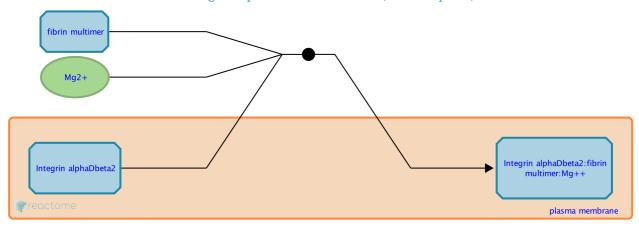
Location: Integrin cell surface interactions

Stable identifier: R-RNO-216069

Type: binding

Compartments: extracellular region, plasma membrane

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Interaction of integrin alphaXbeta2 with fibrin 7

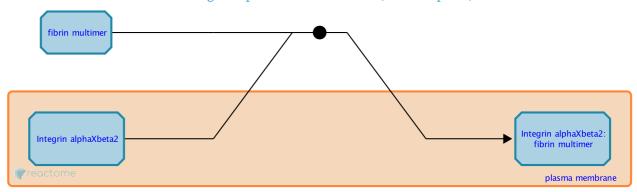
Location: Integrin cell surface interactions

Stable identifier: R-RNO-216082

Type: binding

Compartments: extracellular region, plasma membrane

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

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

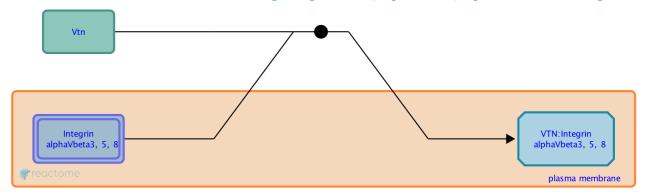
Location: Integrin cell surface interactions

Stable identifier: R-RNO-216076

Type: binding

Compartments: extracellular region, plasma membrane

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

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Integrin alphaXbeta2 binds JAM3 >

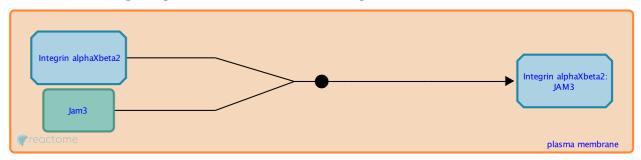
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

ICAM1-5 bind Integrin alphaLbeta2 (LFA-1) **→**

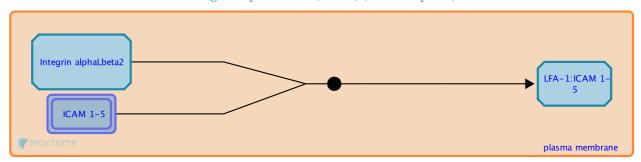
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

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

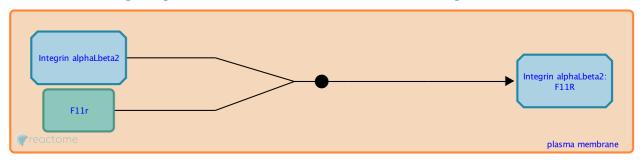
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

BSG (basigin) binds Integrin alpha3beta1, alpha6beta1 7

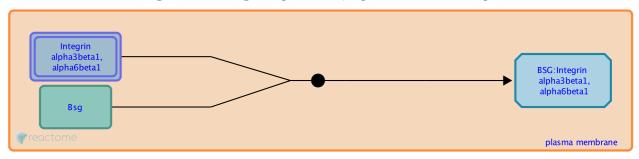
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

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

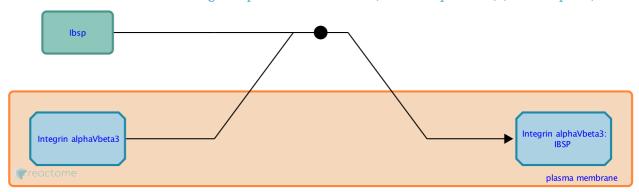
Location: Integrin cell surface interactions

Stable identifier: R-RNO-265427

Type: binding

Compartments: extracellular region, plasma membrane

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Interaction of integrin alphaVbeta3 with Tenascin 7

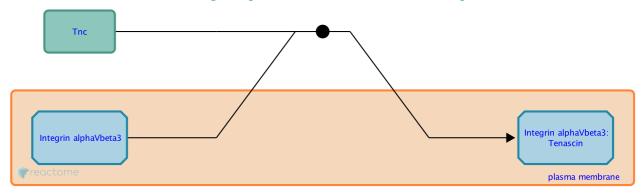
Location: Integrin cell surface interactions

Stable identifier: R-RNO-265426

Type: binding

Compartments: extracellular region, plasma membrane

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Interaction of integrin alphaVbeta3 with Fibrillin 7

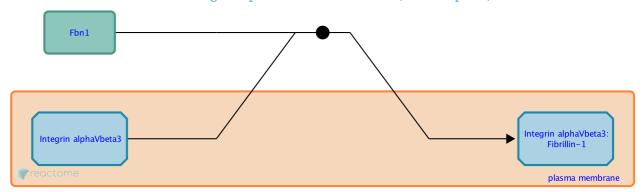
Location: Integrin cell surface interactions

Stable identifier: R-RNO-265423

Type: binding

Compartments: extracellular region, plasma membrane

Inferred from: Interaction of integrin alphaVbeta3 with Fibrillin (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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Interaction of integrin alphaEbeta7 with Cadherin-1 7

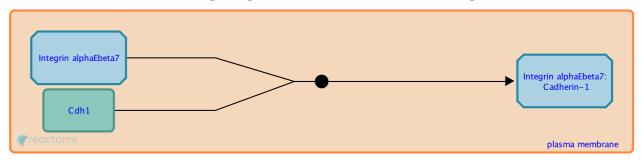
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Interaction of integrin alphaIIbbeta3 with Fibronectin 7

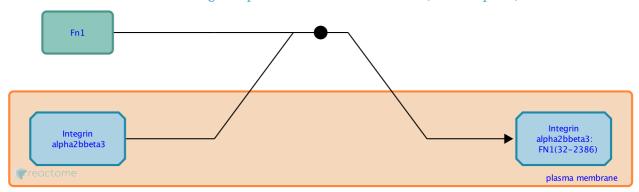
Location: Integrin cell surface interactions

Stable identifier: R-RNO-349593

Type: binding

Compartments: extracellular region, plasma membrane

Inferred from: Interaction of integrin alphaIIbbeta3 with Fibronectin (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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Adhesion of integrin alphaIIbbeta3 to fibrin network 7

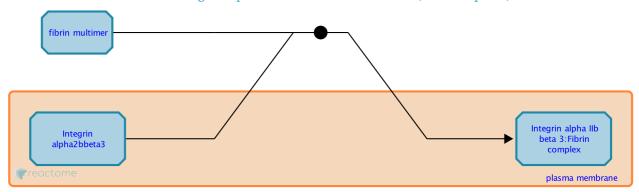
Location: Integrin cell surface interactions

Stable identifier: R-RNO-114560

Type: binding

Compartments: extracellular region, plasma membrane

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

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

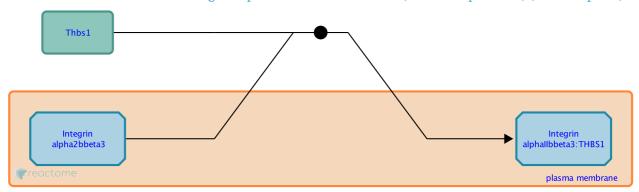
Location: Integrin cell surface interactions

Stable identifier: R-RNO-349603

Type: binding

Compartments: extracellular region, plasma membrane

Inferred from: Interaction of integrin alphaIIb beta 3 with THBS1 (Thrombospondin-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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

LUM (lumican) binds integrin alpha2beta1 >

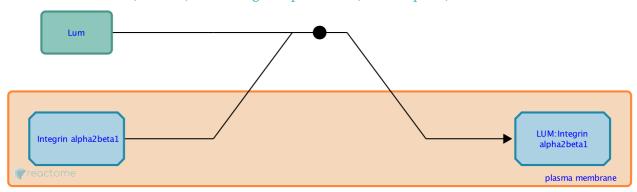
Location: Integrin cell surface interactions

Stable identifier: R-RNO-4085133

Type: binding

Compartments: extracellular region, plasma membrane

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

COMP binds Integrin alpha5beta1, Integrin alphaVbeta3, CD47

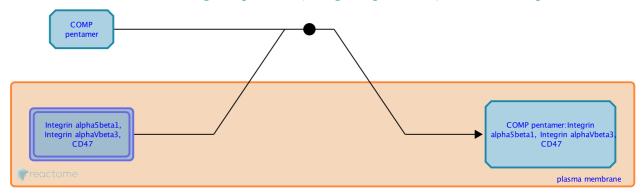
Location: Integrin cell surface interactions

Stable identifier: R-RNO-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.

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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Endorepellin binds KDR (VEGFR2) 对

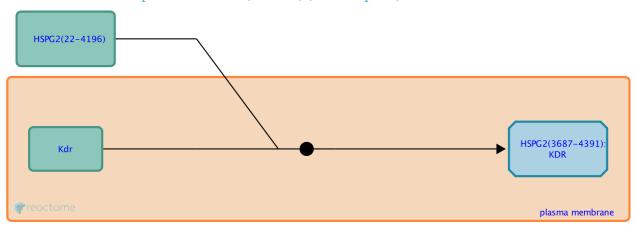
Location: Integrin cell surface interactions

Stable identifier: R-RNO-4088281

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Endorepellin binds KDR (VEGFR2) (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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Endorepellin binds alpha2beta1 integrin →

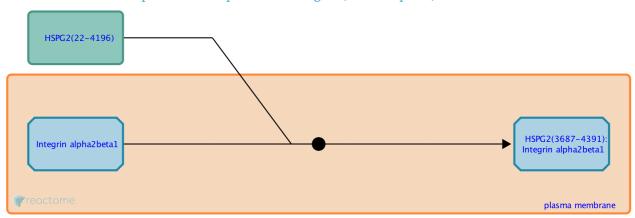
Location: Integrin cell surface interactions

Stable identifier: R-RNO-4088220

Type: binding

Compartments: plasma membrane, extracellular region

Inferred from: Endorepellin binds alpha2beta1 integrin (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.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Table of Contents

Intro	oduction	1
¥ Iı	ntegrin cell surface interactions	2
) →	• Collagen types III, IV, V, VI, VIII, IX, XVI bind integrins alpha1beta1 and alpha2beta1	3
) →	• Collagen type I binds integrin alpha11beta1	4
) →	• Collagen type II binds integrin alpha10beta1	5
) -	• Collagen type VII binds integrin alpha2beta1	6
) -	• Collagen type XIII binds Integrin alpha1beta1	7
→	• Arresten binds integrin alpha1beta1	8
] >•	• Endostatin binds integrin alphaVbeta3, alphaVbeta5, alpha3beta1, alpha5beta1	9
) -	• Tumstatin binds integrin alphaVbeta 3, alpha3beta1	10
→	• Canstatin binds integrins alphaVbeta3, alphaVbeta5	11
→	• Tetrastatin binds integrin alphaVbeta3	12
→	• THBS1 (Thrombospondin-1) binds Integrin alpha3beta1, alpha4beta1	13
] >•	• Integrins alpha4beta1, alpha8beta1, alphaVbeta1, alphaVbeta3, alphaVbeta6 bind Fibronectin matrix	14
﴾	• SPP1 (osteopontin) binds integrin alpha5beta1, alpha9beta1	15
→	• SPP1 (osteopontin) binds CD44	16
→	• VCAM1 binds Integrin alpha4beta1	17
→	Integrin alpha4beta1 binds JAM2:JAM3	18
≯	• ITGA4:ITGB1 binds natalizumab	19
﴾	• MADCAM1-1 binds Integrin alpha4beta7	20
﴾	• Interaction of integrin alpha8beta1 with Tenascin-C	21
→	Interaction of integrin alpha9beta1 with VCAM1	22
) →	• Interaction of integrin alpha9beta1 with Tenascin-C	23
) →	• Interaction of integrin alphaDbeta2 with fibrin	24
) →	• Interaction of integrin alphaXbeta2 with fibrin	25
→	VTN (vitronectin) binds Integrin alphaVbeta3, alphaVbeta5, alphaVbeta8	26
) →	• Integrin alphaXbeta2 binds JAM3	27
) →	• ICAM1-5 bind Integrin alphaLbeta2 (LFA-1)	28
) →	• Integrin alphaLbeta2 (LFA-1) binds F11R (JAM-A)	29
) →	BSG (basigin) binds Integrin alpha3beta1, alpha6beta1	30
) →	• Interaction of integrin alphaVbeta3 with IPSP (Bone sialoprotein 2)	31
) →	• Interaction of integrin alphaVbeta3 with Tenascin	32
) →	• Interaction of integrin alphaVbeta3 with Fibrillin	33
) →	Interaction of integrin alphaEbeta7 with Cadherin-1	34

}	• Interaction of integrin alphaIIbbeta3 with Fibronectin	35
þ	• Adhesion of integrin alphaIIbbeta3 to fibrin network	36
þ	• Interaction of integrin alphaIIb beta 3 with THBS1 (Thrombospondin-1)	37
þ	LUM (lumican) binds integrin alpha2beta1	38
)	• COMP binds Integrin alpha5beta1, Integrin alphaVbeta3, CD47	39
)	• Endorepellin binds KDR (VEGFR2)	40
)	• Endorepellin binds alpha2beta1 integrin	41
Tab	le of Contents	42