Fibrillin-1 binds integrins

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Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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Literature references

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

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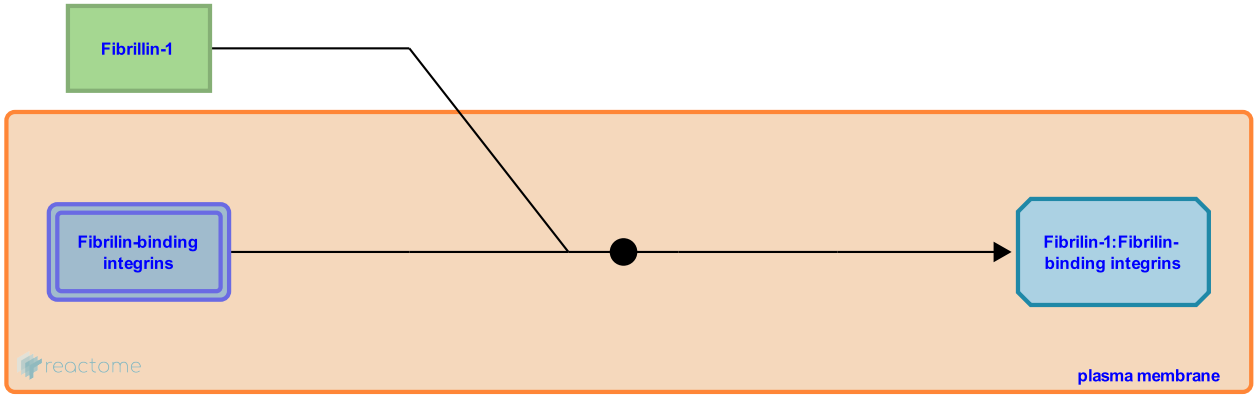
Stable identifier: R-HSA-2328037

Type: binding

Compartments: plasma membrane



Fibrillin-1 splice variants that include the RGD sequence located in the fourth 8-cysteine domain mediate cell adhesion, binding integrin alphaVbeta3 (Pfaff et al. 1996), alpha5beta1 (Bax et al. 2003) and alphaVbeta6 (Jovanovic et al. 2008). AlphaVbeta3 has the highest affinity for fibrillin-1. Integrin alphaVbeta3 is a high-affinity fibrillin-1 receptor (K(d) approximately 40 nM), whereas integrins alphaVbeta6 and alpha5beta1 show moderate-affinity (K(d) approximately 450 nM) and low-affinity (K(d) >1 microM) binding respectively (Jovanovic et al. 2008).

Literature references

Pfaff, M., Timpl, R., Sakai, LY., Reinhardt, DP. (1996). Cell adhesion and integrin binding to recombinant human fibrillin-1. *FEBS Lett., 384*, 247-50. ↗

Editions

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