

HSPG2 (perlecan) binds alpha-dys-troglycan

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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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- 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. [↗](#)

Reactome database release: 90

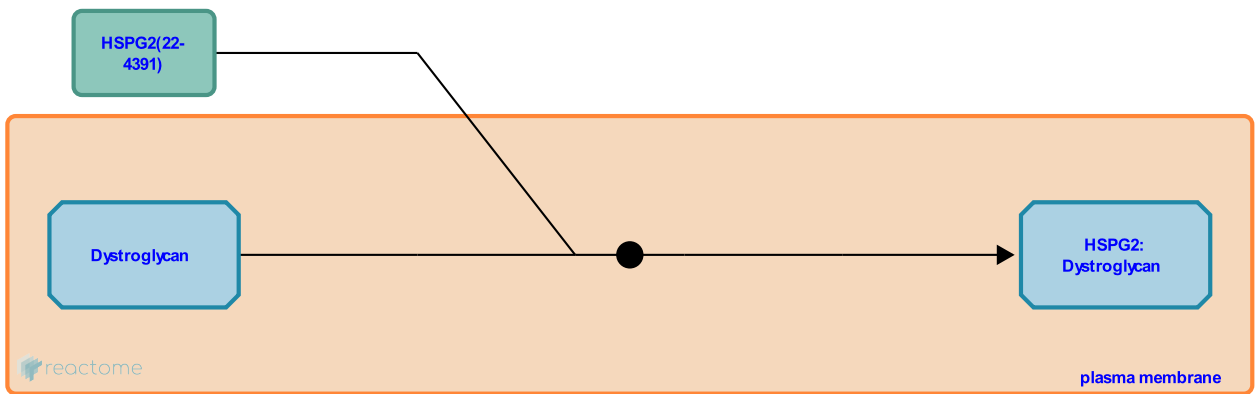
This document contains 1 reaction ([see Table of Contents](#))

HSPG2 (perlecan) binds alpha-dystroglycan ↗

Stable identifier: R-HSA-2396395

Type: binding

Compartments: plasma membrane, extracellular region



HSPG2 (perlecan) is a modular proteoglycan primarily located in the basement membranes of vascularized tissues. It is involved in several developmental processes, both during embryogenesis and in human disease such as cancer and diabetes (Iozzo et al. 1994). Domain V of the core protein binds alpha-dystroglycan (Talts et al. 1999), which in vivo forms a membrane-associated heterodimer with beta-dystroglycan (Peng et al. 1998).

Literature references

Brancaccio, A., Timpl, R., Talts, JF., Göhring, W., Andac, Z. (1999). Binding of the G domains of laminin alpha1 and alpha2 chains and perlecan to heparin, sulfatides, alpha-dystroglycan and several extracellular matrix proteins. *EMBO J.*, 18, 863-70. ↗

Editions

2012-08-08	Authored	Jupe, S.
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