

# Dscam binds Dcc

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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

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

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

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

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

Reactome database release: 88

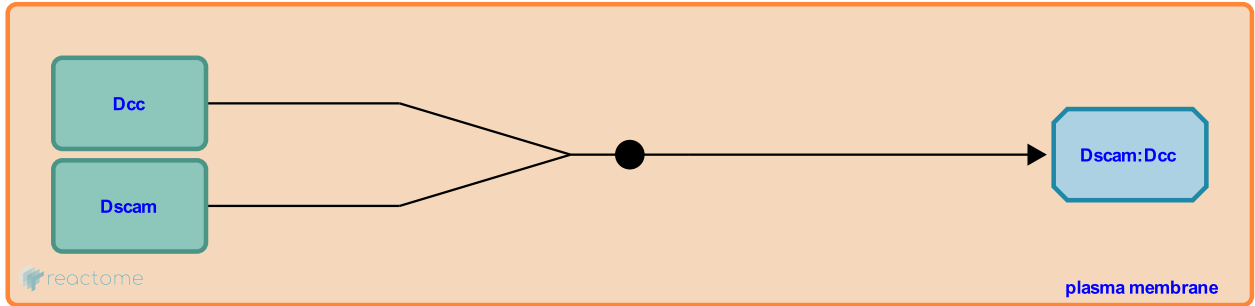
This document contains 1 reaction ([see Table of Contents](#))

**Dscam binds Dcc** [↗](#)

**Stable identifier:** R-MMU-451360

**Type:** binding

**Compartments:** plasma membrane



DSCAM and DCC (Deleted in Colorectal Carcinoma) form a receptor complex in commissural axons in the absence of netrin1. They associate through a transmembrane interaction. The functional implication of this interaction is not known, but may allow DCC and DSCAM to contribute to other guidance pathways in a netrin1 independent fashion. It may serve as a way to hold DSCAM and DCC in a resting state, until netrin1 reaches a critical concentration at which both receptors are activated.

**Literature references**

Nikolaev, A., Ly, A., Stein, E., Zheng, Y., Tessier-Lavigne, M., Suresh, G. (2008). DSCAM is a netrin receptor that collaborates with DCC in mediating turning responses to netrin-1. *Cell*, 133, 1241-54. [↗](#)

**Editions**

2010-01-05	Authored, Edited	Garapati, P V.
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