

# DVL binds Ccdc88c

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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

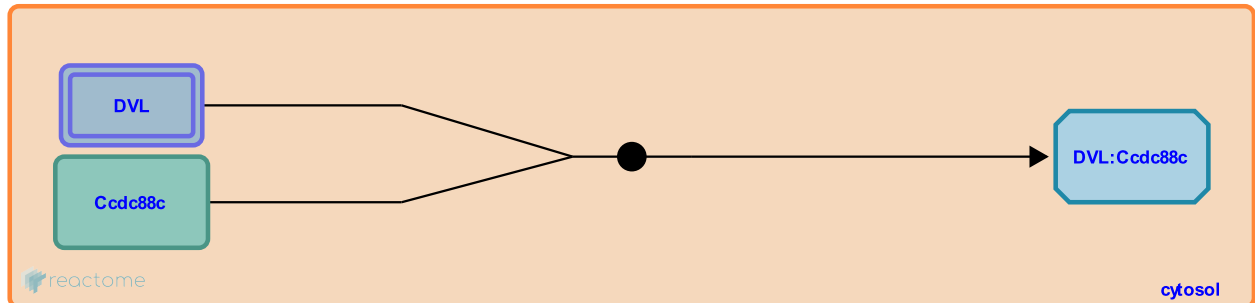
This document contains 1 reaction ([see Table of Contents](#))

## DVL binds Ccdc88c [↗](#)

**Stable identifier:** R-NUL-5368587

**Type:** binding

**Compartments:** cytosol



Ccdc88c was identified as Dapple in a screen of mouse brain cDNAs for DVL1 interacting proteins (Oshita et al, 2003). Ccdc88c binds to the PDZ domain of DVL through the three amino acids Gly-Cys-Val at the C-terminus, and this interaction negatively regulates canonical WNT signaling (Oshita et al, 2003; Ekici et al, 2010).

### Literature references

Kikuchi, A., Asashima, M., Michiue, T., Kishida, S., Asahara, T., Oshita, A. et al. (2003). Identification and characterization of a novel Dvl-binding protein that suppresses Wnt signalling pathway. *Genes Cells*, 8, 1005-17. [↗](#)

Ekici, AB., Morris-Rosendahl, DJ., Wenzel, D., Boltshauser, E., Lorenz, I., Thiel, CT. et al. (2010). Disturbed Wnt Signalling due to a Mutation in CCDC88C Causes an Autosomal Recessive Non-Syndromic Hydrocephalus with Medial Diverticulum. *Mol Syndromol*, 1, 99-112. [↗](#)

### Editions

2014-04-22	Authored	Kikuchi, A.
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