

Nephrin binds CD2AP

Garapati, P V., Grahammer, Florian., Huber, TB., de Bono, B.

European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

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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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Reactome database release: 88

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

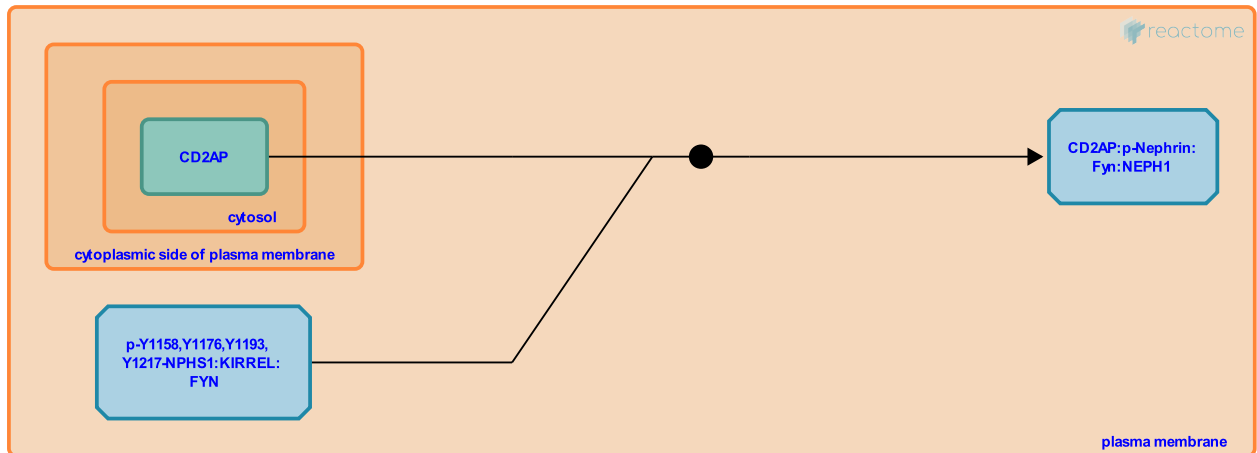
Nephrin binds CD2AP [↗](#)

Stable identifier: R-HSA-373727

Type: binding

Compartments: plasma membrane

Inferred from: [Nephrin binds CD2AP \(Mus musculus\)](#)



CD2-associated protein (CD2AP) is an adapter molecule of the immunoglobulin superfamily that was first identified as an SH3-containing protein that binds to the cytoplasmic domain of CD2. In the glomerulus, CD2AP is located in the cytoplasm beneath the slit-diaphragm, where it binds to the cytoplasmic domain of nephrin. CD2AP acts as a linker protein and may be involved in connecting nephrin to the actin cytoskeleton in podocytes, although direct evidence of this is still lacking. Interaction with CD2AP might be important in the steady-state situation. In addition CD2AP can facilitate nephrin-induced PI3K-AKT signaling, a pathway that has been shown to be important for nephrin-mediated actin reorganization in podocytes and protection of podocytes from apoptosis.

Editions

2008-02-26	Authored	de Bono, B., Garapati, P V.
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