

Neurofascin binds Ankyrin-G

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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

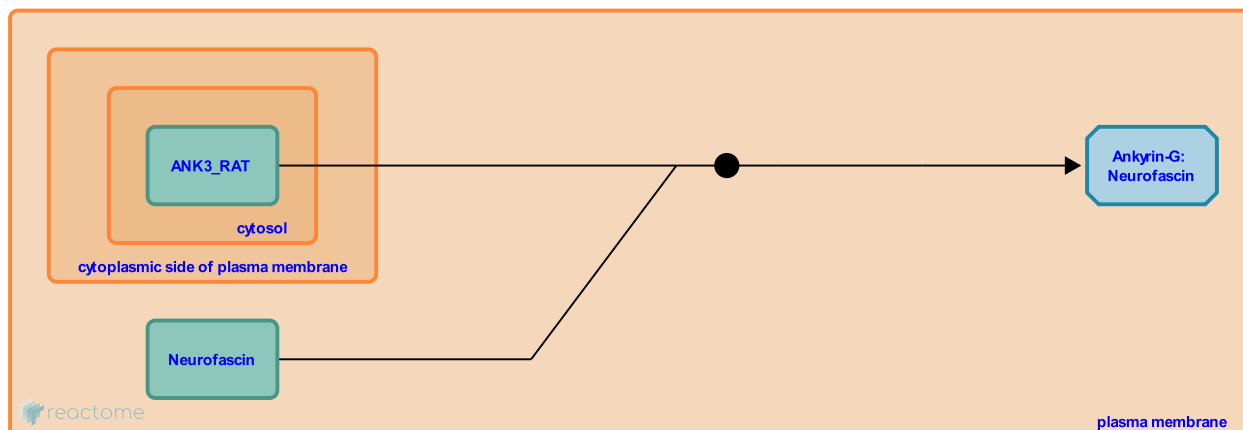
This document contains 1 reaction ([see Table of Contents](#))

Neurofascin binds Ankyrin-G [↗](#)

Stable identifier: R-RNO-443773

Type: binding

Compartments: cytosol, plasma membrane



The cytoplasmic domains of neurofascin contains a highly conserved sequence (F1315IGQY) that binds ankyrin. The membrane binding domain of ankyrin has two distinct binding sites for neurofascin and is proposed to form lateral complexes between ion channels and cell adhesion molecules as well as to couple these proteins to the spectrin based membrane skeleton.

Literature references

Zhang, X., Bennett, V., Carpenter, S., Davis, JQ. (1998). Structural requirements for association of neurofascin with ankyrin. *J Biol Chem*, 273, 30785-94. [↗](#)

Editions

2008-07-30	Authored, Edited	Garapati, P V.
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