

Heterodimerization of nephrin and KIRREL2, KIRREL3

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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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Reactome database release: 88

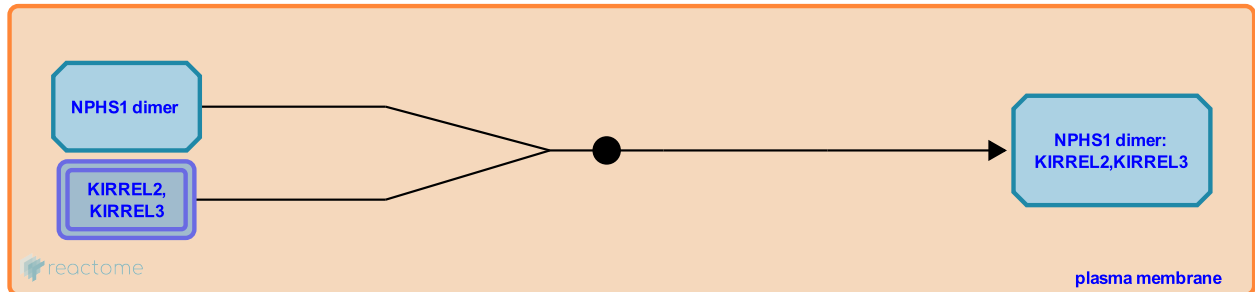
This document contains 1 reaction ([see Table of Contents](#))

Heterodimerization of nephrin and KIRREL2, KIRREL3 [↗](#)

Stable identifier: R-HSA-451757

Type: binding

Compartments: plasma membrane



NEPH2 and NEPH3 specifically interact with the extracellular domains of nephrin in the slit diaphragm of podocytes and potentially other tissues as well (eg. brain). The functional significance of these interactions is unknown.

Literature references

Walz, G., Gödel, M., Martin, K., Kramer-Zucker, A., Noutsou, F., Wanner, N. et al. (2010). A model organism approach: defining the role of Neph proteins as regulators of neuron and kidney morphogenesis. *Hum Mol Genet*, *19*, 2347-59. [↗](#)

Walz, G., Petraschka, D., Kretz, O., Benzing, T., Zentgraf, H., Gerke, P. et al. (2005). NEPH2 is located at the glomerular slit diaphragm, interacts with nephrin and is cleaved from podocytes by metalloproteinases. *J Am Soc Nephrol*, *16*, 1693-702. [↗](#)

Editions

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