Nephrin family interactions

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This is just an excerpt of a full-length report for this pathway. To access the complete report, please download it at the Reactome Textbook.

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https://reactome.org
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


Reactome database release: 83

This document contains 1 pathway and 9 reactions (see Table of Contents)
**Nephrin family interactions**

**Stable identifier:** R-CFA-373753

**Compartments:** plasma membrane

**Inferred from:** Nephrin family interactions (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: [http://www.pantherdb.org/about.jsp](http://www.pantherdb.org/about.jsp)
**Nephrin trans-homophilic interaction**

**Location:** Nephrin family interactions

**Stable identifier:** R-CFA-373732

**Type:** binding

**Compartments:** plasma membrane

**Inferred from:** Nephrin trans-homophilic interaction (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

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**Followed by:** Heterodimerization of nephrin and KIRREL2, KIRREL3, Cis-Heterodimerization of nephrin and KIRREL
Cis-Heterodimerization of nephrin and KIRREL

Location: Nephrin family interactions

Stable identifier: R-CFA-373714

Type: binding

Compartments: plasma membrane

Inferred from: Cis-Heterodimerization of nephrin and KIRREL (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Precended by: Nephrin trans-homophilic interaction

Followed by: Interaction of IQGAP1 with nephrin, Nephrin dimer:KIRREL binds FYN
Heterodimerization of nephrin and KIRREL2, KIRREL3

Location: Nephrin family interactions

Stable identifier: R-CFA-4S1757

Type: binding

Compartments: plasma membrane

Inferred from: Heterodimerization of nephrin and KIRREL2, KIRREL3 (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

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Preceded by: Nephrin trans-homophilic interaction
**Nephrin dimer:KIRREL binds FYN**

**Location:** Nephrin family interactions

**Stable identifier:** R-CFA-8981534

**Type:** binding

**Compartments:** plasma membrane

**Inferred from:** Nephrin dimer:KIRREL binds FYN (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: [http://www.pantherdb.org/about.jsp](http://www.pantherdb.org/about.jsp)

**Preceded by:** Cis-Heterodimerization of nephrin and KIRREL

**Followed by:** Phosphorylation of nephrin by FYN
Phosphorylation of nephrin by FYN

Location: Nephrin family interactions

Stable identifier: R-CFA-373747

Type: transition

Compartments: plasma membrane

Inferred from: Phosphorylation of nephrin by FYN (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Preceded by: Nephrin dimer:KIRREL binds FYN

Followed by: Nephrin binds NCK, Nephrin interacts with Podocin
Nephrin binds NCK

**Location:** Nephrin family interactions

**Stable identifier:** R-CFA-373724

**Type:** binding

**Compartments:** plasma membrane

**Inferred from:** Nephrin binds NCK (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/parologue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: [http://www.pantherdb.org/about.jsp](http://www.pantherdb.org/about.jsp)

**Preceded by:** Phosphorylation of nephrin by FYN

**Followed by:** Nephrin mediated activation of N-WASP
Nephrin mediated activation of N-WASP

Location: Nephrin family interactions

Stable identifier: R-CFA-532603

Type: binding

Compartments: plasma membrane

Inferred from: Nephrin mediated activation of N-WASP (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Preceded by: Nephrin binds NCK
**Nephrin interacts with Podocin**

**Location:** Nephrin family interactions

**Stable identifier:** R-CFA-373734

**Type:** binding

**Compartments:** plasma membrane

**Inferred from:** Nephrin interacts with Podocin (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

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**Preceded by:** Phosphorylation of nephrin by FYN
Interaction of IQGAP1 with nephrin

Location: Nephrin family interactions

Stable identifier: R-CFA-451377

Type: binding

Compartments: plasma membrane

Inferred from: Interaction of IQGAP1 with nephrin (Homo sapiens)

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

More details and caveats of the event inference in Reactome. For details on PANTHER see also: http://www.pantherdb.org/about.jsp

Preceded by: Cis-Heterodimerization of nephrin and KIRREL
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