

Nephrin Antibody
Catalog # ASC10103**Specification**

Nephrin Antibody - Product Information

Application	WB, IHC, IF
Primary Accession	O60500
Other Accession	NP_004637 , 4758822
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	Nephrin antibody can be used for detection of Nephrin by Western blot at 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 1 µg/mL. For immunofluorescence start at 10 µg/mL.

Nephrin Antibody - Additional InformationGene ID **4868****Other Names**

Nephrin Antibody: CNF, NPHN, nephrin, Nephrin, Renal glomerulus-specific cell adhesion receptor, nephrosis 1, congenital, Finnish type (nephrin)

Target/Specificity

NPHS1;

Reconstitution & Storage

Antibody can be stored at 4°C up to one year. Antibodies should not be exposed to prolonged high temperatures.

Precautions

Nephrin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Nephrin Antibody - Protein Information**Name** NPHS1**Synonyms** NPHN**Function**

Seems to play a role in the development or function of the kidney glomerular filtration barrier. Regulates glomerular vascular permeability. May anchor the podocyte slit diaphragm to the actin cytoskeleton. Plays a role in skeletal muscle formation through regulation of myoblast fusion (By similarity).

Cellular Location

Cell membrane; Single-pass type I membrane protein. Note=Predominantly located at podocyte slit diaphragm between podocyte foot processes. Also associated with podocyte apical plasma membrane.

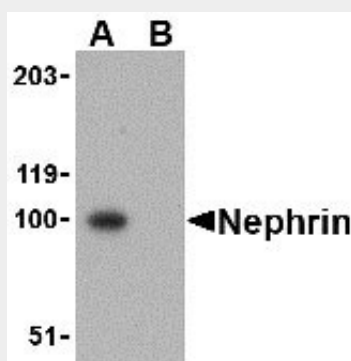
Tissue Location

Specifically expressed in podocytes of kidney glomeruli

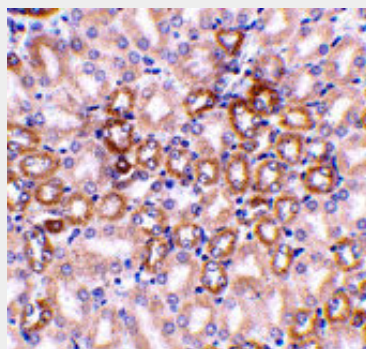
Nephrin Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

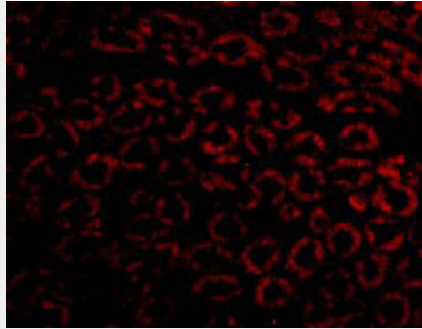
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Nephrin Antibody - Images

Western blot analysis of Nephrin in mouse kidney tissue lysate with Nephrin antibody at 1 μ g/mL in the (A) absence and (B) presence of blocking peptide.



Immunohistochemistry of Nephrin in mouse kidney tissue with Nephrin antibody at 1 μ g/mL.



Immunofluorescence of Nephtrin in Mouse Kidney cells with Nephtrin antibody at 10 µg/mL.

Nephtrin Antibody - Background

Nephtrin Antibody: Nephtrin is strongly expressed in renal glomeruli and is a member of the immunoglobulin family of cell adhesion molecules. Mutations in the Nephtrin gene result in congenital nephrotic syndrome, an autosomal-recessive disorder characterized by massive proteinuria in utero and nephrosis at birth. Renal glomeruli allow normal kidneys to filter plasma so that it is very pure. Nephtrin is expressed in the podocyte slit-diaphragm of the renal glomeruli in a manner that suggests that Nephtrin molecules homodimerize in an anti-parallel fashion similar to cadherin interactions in adherens junctions. Thus, Nephtrin may constitute the entire extracellular structure of the slit-diaphragm.

Nephtrin Antibody - References

Kestila M, Lenkkeri U, Mannikko M, et al. Positionally cloned gene for a novel glomerular protein - Nephtrin - is mutated in congenital nephrotic syndrome. *Mol. Cell* 1998; 1:575-582.
Tryggvason K. Unraveling the mechanisms of glomerular ultrafiltration: nephrin, a key component of the slit diaphragm. *J. Am. Soc. Nephrol.* 1999; 10:2440-5.
Tryggvason K and Wartiovaara J. Molecular basis of glomerular permselectivity. *Curr, Opin. Nephrol. Hypertens.* 2001; 10:543-9. (07-01D)