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Nephrin Antibody
Catalog # ASC11857

Specification

Nephrin Antibody - Product Information

Application	**WB, IHC, IF, E**
Primary Accession	O60500
Other Accession	NP_004637, 4758822
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 125, 137 kDa** **Observed: 125 kDa KDa**
Application Notes	**Nephrin antibody can be used for detection of Nephrin by Western blot at 1 - 2 µg/ml. Antibody can also be used for immunohistochemistry at 5 µg/ml. For immunofluorescence start at 20 µg/mL**

Nephrin Antibody - Additional Information

Gene ID **4648**

Target/Specificity
NPHS1; Nephrin antibody is human specific.

Reconstitution & Storage
Nephrin antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

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.

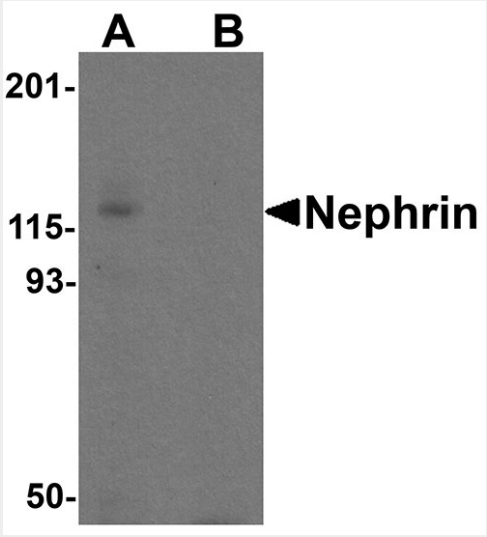
Tissue Location
Specifically expressed in podocytes of kidney glomeruli

Nephrin Antibody - Protocols

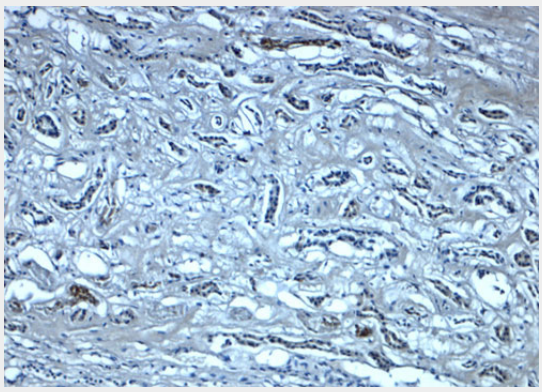
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Nephrin Antibody - Images



Western blot analysis of Nephrin in human kidney tissue lysate with Nephrin antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of Nephrin in human kidney tissue with Nephrin antibody at 5 µg/ml.

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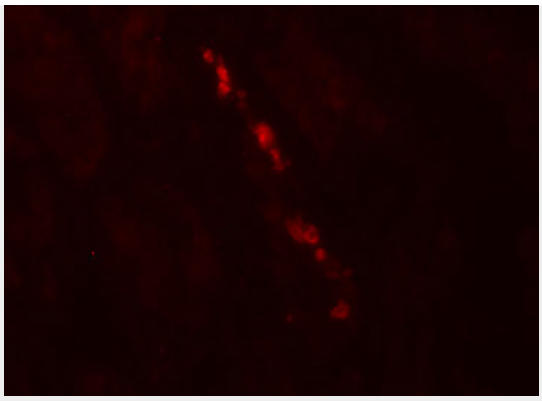

Immunofluorescence of Nephrin in human kidney tissue with Nephrin antibody at 20 µg/ml.

Nephrin Antibody - Background

Nephrin is strongly expressed in renal glomeruli and is a member of the immunoglobulin family of cell adhesion molecules. Mutations in the Nephrin gene result in congenital nephrotic syndrome, an autosomal-recessive disorder characterized by massive proteinuria in utero and nephrosis at birth (1). Renal glomeruli allow normal kidneys to filter plasma so that it is very pure. Nephrin is expressed in the podocyte slit-diaphragm of the renal glomeruli in a manner that suggests that Nephrin molecules homodimerize in an anti-parallel fashion similar to cadherin interactions in adherens junctions. Thus, Nephrin may constitute the entire extracellular structure of the slit-diaphragm (2,3).

Nephrin Antibody - References

Kestila M, Lenkkeri U, Mannikko M, et al. Positionally cloned gene for a novel glomerular protein – Nephrin – 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.