10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Nephrin Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM1865a

Product Information

Application	WB, IF, E
Primary Accession	O60500
Other Accession	NP_004637.1
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Mouse
Clonality	Monoclonal
Isotype	IgM,K
Clone Names	174CT2.1.1
Calculated MW	134742
Antigen Region	1088-1117

Additional Information

Gene ID	4868
Other Names	Nephrin, Renal glomerulus-specific cell adhesion receptor, NPHS1, NPHN
Target/Specificity	This Nephrin antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 1088-1117 amino acids from human Nephrin.
Dilution	WB~~1:500~1000 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Nephrin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NPHS1 (HGNC:7908)
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

Background

This gene encodes a member of the immunoglobulin family of cell adhesion molecules that functions in the glomerular filtration barrier in the kidney. The gene is primarily expressed in renal tissues, and the protein is a type-1 transmembrane protein found at the slit diaphragm of glomerular podocytes. The slit diaphragm is thought to function as an ultrafilter to exclude albumin and other plasma macromolecules in the formation of urine. Mutations in this gene result in Finnish-type congenital nephrosis 1, characterized by severe proteinuria and loss of the slit diaphragm and foot processes.

References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010) Wu, F., et al. J. Am. Soc. Nephrol. 21(9):1456-1467(2010) Tossidou, I., et al. J. Biol. Chem. 285(33):25285-25295(2010) Machuca, E., et al. J. Am. Soc. Nephrol. 21(7):1209-1217(2010) Aya, K., et al. Kidney Int. 57(2):401-404(2000)

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