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Product datasheet for TA306037

Nephrin (NPHS1) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	WB: 1-4 µg/mL IHC-P: 1-2 µg/mL. Antibody validated: Western Blot in human, mouse and rat samples Immunohistochemistry in mouse, and rat samples. All other applications and species not yet tested.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Anti-Nephrin antibody (**2265**) was raised against a peptide corresponding to 14 amino acids near the carboxy terminus of human Nephrin. The immunogen is located within the last 50 amino acids of Nephrin.
Formulation:	Nephrin Antibody is supplied in PBS containing 0.02% sodium azide.
Concentration:	1 mg/mL
Purification:	Nephrin Antibody is affinity chromatography purified via peptide column.
Conjugation:	Unconjugated
Storage:	Nephrin antibody can be stored at 4°C up to one year. Antibodies should not be exposed to prolonged high temperatures.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	Predicted: 135 kD + 10 N-linked glycosylation sites Observed: 200 kD
Gene Name:	NPHS1 nephrin

View online »

Database Link: NP_004637
Entrez Gene 54631 Mouse Entrez Gene 64563 Rat Entrez Gene 4868 Human
O60500

Background: Nephrin Antibody: 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. 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.

Synonyms: CNF; nephrin; NPHN

Note: Optimal dilutions for each application to be determined by the researcher.

Protein Families: Druggable Genome, Transmembrane

Product images:

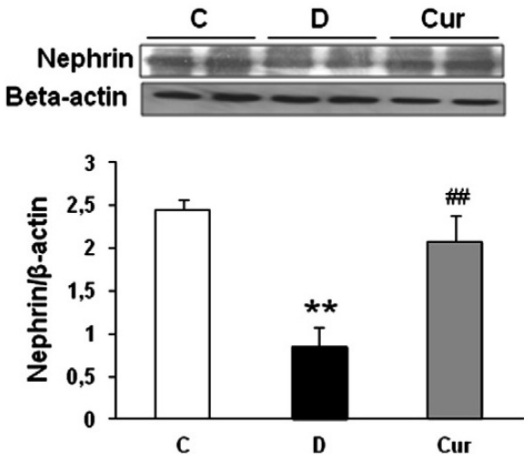

Figure 10 Induced Expression of Nephrin by Curcumin Treatment in the Renal Tissues of Type 1 Diabetic Rats (Soetikno et al., 2013) Nephrin expression detected by anti-nephrin antibodies in type 1 diabetic rats. Nephrin was down-regulated in the vehicle-treated diabetic rats as compared to the control nondiabetic rats. However, this decrease in nephrin protein expression was markedly increased by curcumin treatment (P<.05) to near-normal levels. (n=5 in each group)

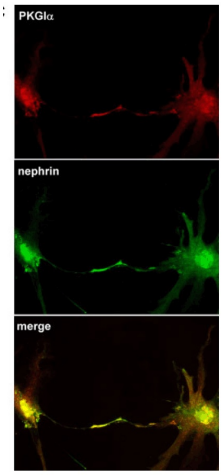

Figure 11 Immunofluorescence and Localization Validation of Nephrin in Cultured Rat Podocytes (Piwkowska et al., 2012)
Immunofluorescence staining showed Nephrin expression (green) detected by anti-nephrin antibodies and PKGIalpha (red). The co-localization of two antibodies (yellow) in rat podocytes was observed particularly at the tips of the cell processes.

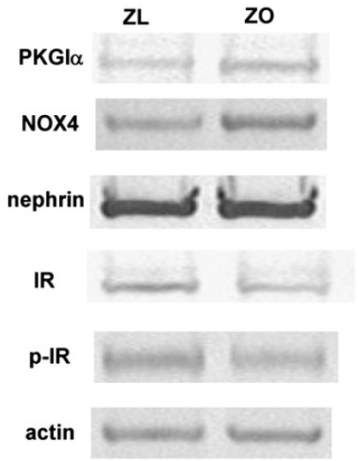

Figure 12 WB Validation of Nephrin in Glomeruli of Zucker Obese (ZO) and Zucker Lean (ZL) Rats (Piwkowska et al., 2013)
The expression of nephrin detected by anti-nephrin antibodies did not change in ZO rats as compared to the control rats.

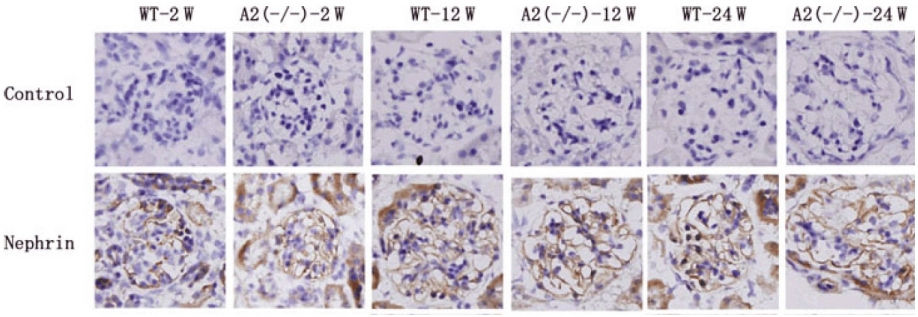

Figure 13 Immunohistochemistry Validation of Nephrin in Mouse Kidney (Toyama et al., 2012)
Protein analysis for nephrin by immunohistochemistry with anti-nephrin antibodies in the kidney of wild-type or AMPD2-deficient mice at 2, 12 or 24 weeks of age. No difference between wild-type and AMPD2-deficient mice at any age was observed.

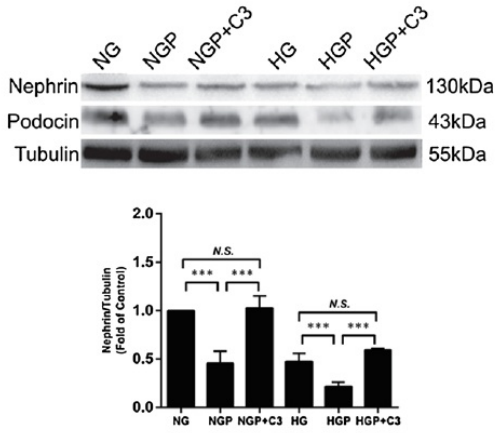

Figure 14 Regulated Expression Validation of Nephrin in Mouse Podocyte Cells Cultured in Normal Glucose (NG) Medium or High Glucose (HG) Medium (Huang et al., 2019)
Western Blot analysis was used to access the protein expression level of nephrin with anti-nephrin antibodies. Nephrin expression was down-regulated by PEGF treatment (NGP or HGP), which was reversed by the addition of C3 transferase.

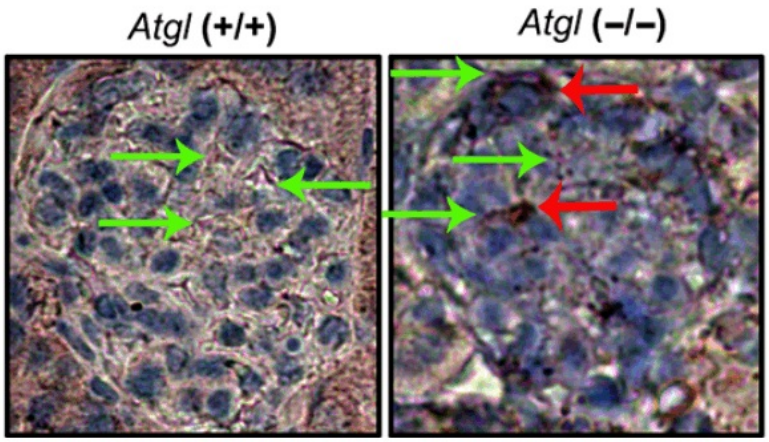

Figure 7 Apoptosis Assay Validation of Nephrin in Mouse Glomerulus (Chen et al., 2017)
Glomerular cells of Atgl (-/-) mice were double labeled with TUNEL staining (dark brown nucleus indicated by red arrows) and immunofluorescence staining of nephrin detected by anti-nephrin antibodies (TA306037) (pink cytoplasm indicated by green arrows) as a marker for podocytes. Colocalization of TUNEL-positive cells and nephrin proved that apoptosis was induced in Atgl(-/-) mice as compared to WT mice.

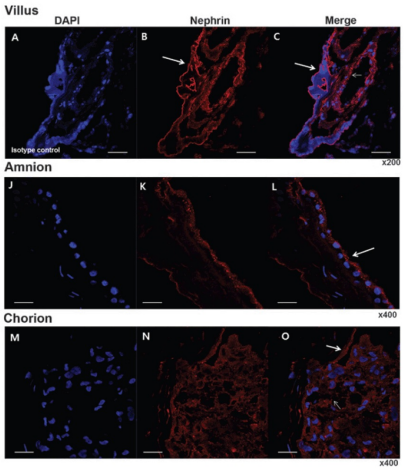

Figure 8 Immunolocalization Validation of Nephrin in Human Placenta (Yun et al., 2015)
Immunofluorescence staining showed Nephrin expression detected by anti-nephrin antibodies (TA306037) was clearly localized in villi (A-C) and fetal membranes, Amnion (J-L) and Chorion (M-O). The staining was markedly positive at apical membrane of villi (arrows in B and C) and amnion (arrow in L), and in the stromal cells of chorion (small arrow in O).

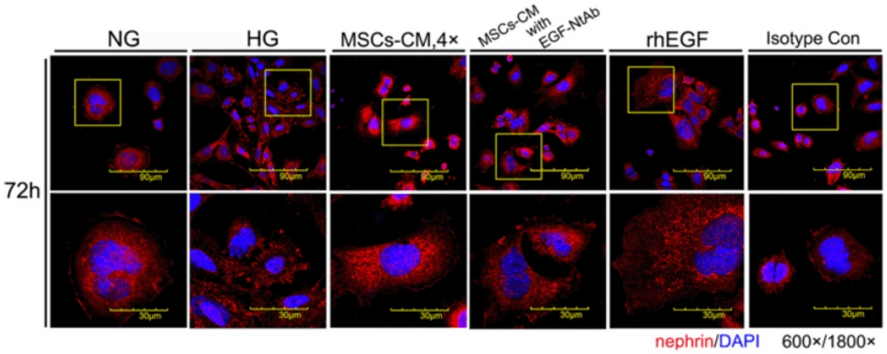

Figure 9 Immunofluorescence Validation of Nephrin in Mouse Podocyte (Li et al, 2013)
Double immunofluorescence analysis of podocytic membrane protein nephrin (red) and nuclei stained with DAPI (blue). The presence of high glucose (HG) and neutralizing antibody (NtAb) which blocked epithelial growth factor(EGF) decreased nephrin expression while mesenchymal stem cells-conditioned medium (MSCs-CM) and recombinant human EGF (rhEGF) prevented the effect.