

Rabbit Anti-Nephrin antibody

SL10233R

Product Name Nephrin

Chinese Name 肾小球 Cell adhesion molecule 受体抗体

Alias CNF; NPHN; Nephrosis 1 congenital Finnish type; NPHS 1; NPHS1; Renal glomerulus specific cell adhesion receptor; Renal glomerulus-specific cell adhesion receptor; NPHN_HUMAN .

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human,Mouse,Rat,Dog (predicted:Rabbit)

Applications WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1µg/Test
(Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 138kDa

Cellular localization Extracellular matrix

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human Nephrin: 451-550/1241
<Extracellular>

Lsotype IgG

Purification affinity purified by Protein A

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed [PubMed](#)

Product This gene encodes a member of the immunoglobulin family of cell adhesion molecules

Detail

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.[provided by RefSeq, Oct 2009]

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.

Subunit:

Interacts with CD2AP (via C-terminal domain). Interacts with MAGI1 (via PDZ 2 and 3 domains) forming a tripartite complex with IGSF5/JAM4. Interacts with DDN; the interaction is direct. Self-associates (via the Ig-like domains). Also interacts (via the Ig-like domains) with KIRREL/NEPH1 and KIRREL2; the interaction with KIRREL is dependent on KIRREL glycosylation. Forms a complex with ACTN4, CASK, IQGAP1, MAGI2, SPTAN1 and SPTBN1 (By similarity). Interacts with NPHS2.

Subcellular Location:

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

Tissue Specificity:

Specifically expressed in podocytes of kidney glomeruli. Expressed in kidney glomeruli. In the embryo, expressed in the mesonephric kidney at E11 with strong expression in cranial tubules with podocyte-like structures. Expression is observed in the podocytes of the developing kidney from E13. High expression is also detected in the developing cerebellum, hindbrain, spinal cord, retina and hypothalamus. Expressed in skeletal muscle during myoblast fusion such as in the adult following acute injury and in the embryo but not detected in uninjured adult skeletal muscle. Isoform 1 and isoform 2 are expressed in the newborn brain and developing cerebellum. Isoform 1 is the predominant isoform in adult kidney

Post-translational modifications:

Phosphorylated at Tyr-1193 by FYN, leading to the recruitment and activation of phospholipase C-gamma-1/PLCG1.

DISEASE:

Defects in NPHS1 are the cause of nephrotic syndrome type 1 (NPHS1) [MIM:256300];

also known as Finnish congenital nephrosis (CNF). A renal disease characterized clinically by proteinuria, hypoalbuminemia, hyperlipidemia, and edema. Kidney biopsies show non-specific histologic changes such as focal segmental glomerulosclerosis and diffuse mesangial proliferation. Some affected individuals have an inherited steroid-resistant form and progress to end-stage renal failure.

Similarity:

Belongs to the immunoglobulin superfamily.

Contains 1 fibronectin type-III domain.

Contains 8 Ig-like C2-type (immunoglobulin-like) domains.

SWISS:

O60500

Gene ID:

4868

Database links:

[Entrez Gene: 4868](#) Human

[Entrez Gene: 54631](#) Mouse

[Entrez Gene: 64563](#) Rat

[Omim: 602716](#) Human

[SwissProt: O60500](#) Human

[SwissProt: Q9QZS7](#) Mouse

[SwissProt: Q9R044](#) Rat

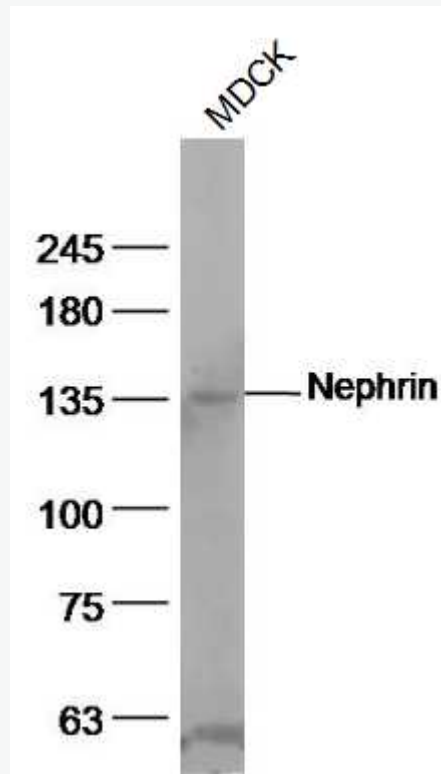
[Unigene: 122186](#) Human

[Unigene: 437830](#) Mouse

[Unigene: 48745](#) Rat

葛博: SL10233R Cellular localization: 质膜、Extracellular matrix 17.10.19 日张凤英
修改

**Product
Picture**



Sample:

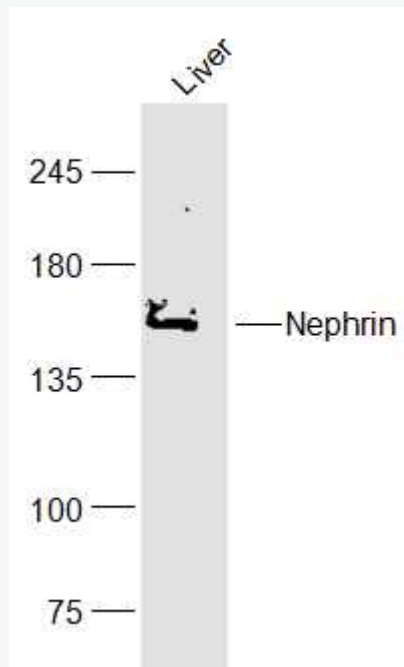
MDCK(Dog) Cell Lysate at 40 ug

Primary: Anti-Nephrin (SL10233R) at 1/500 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 138 kD

Observed band size: 138 kD



Sample:

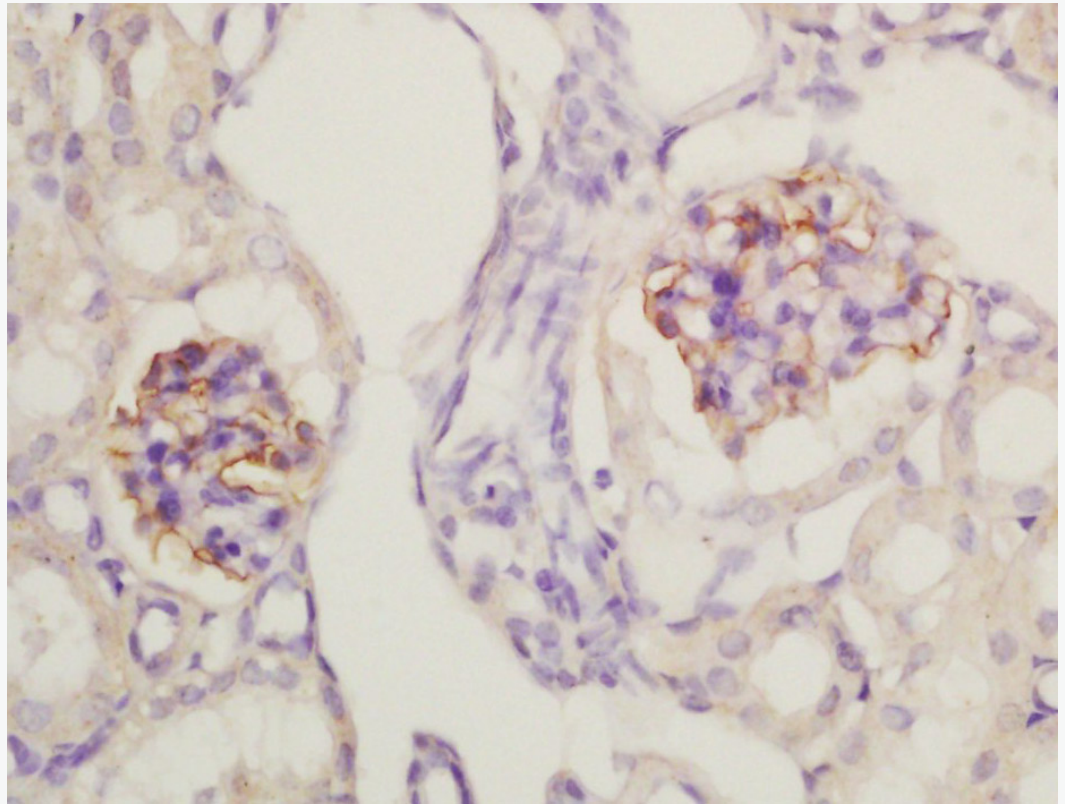
Liver (Mouse) Lysate at 40 ug

Primary: Anti-Nephrin (SL10233R) at 1/300 dilution

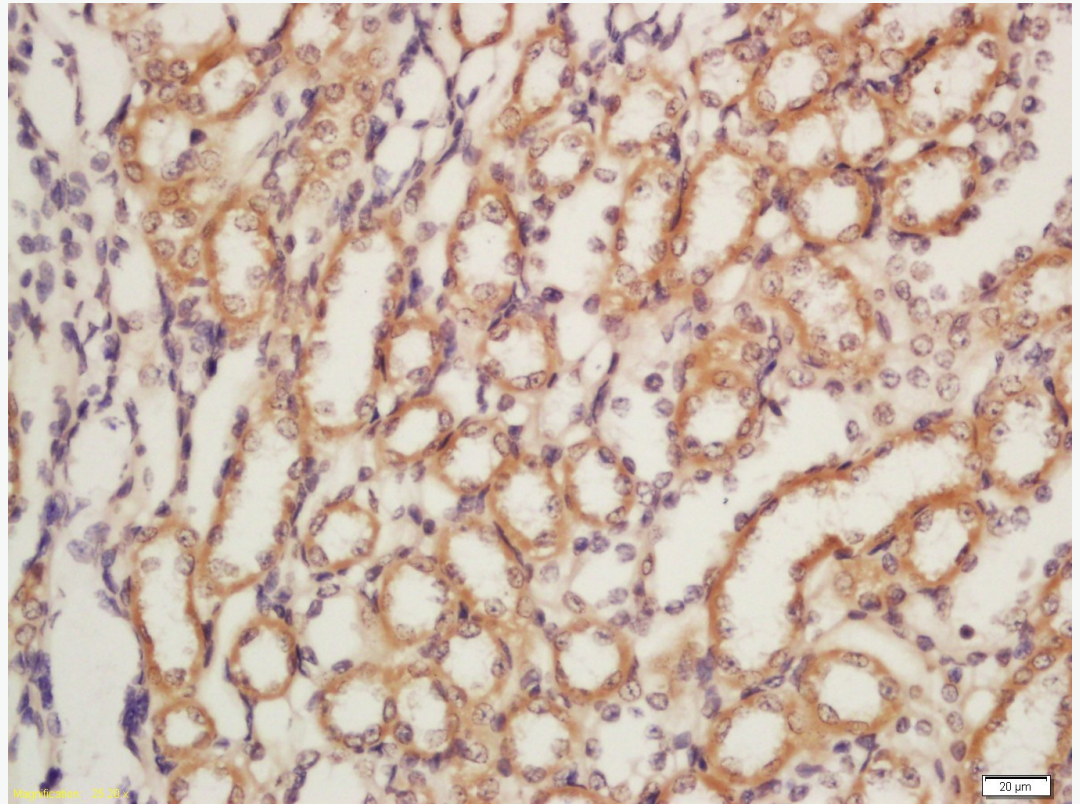
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 138 kD

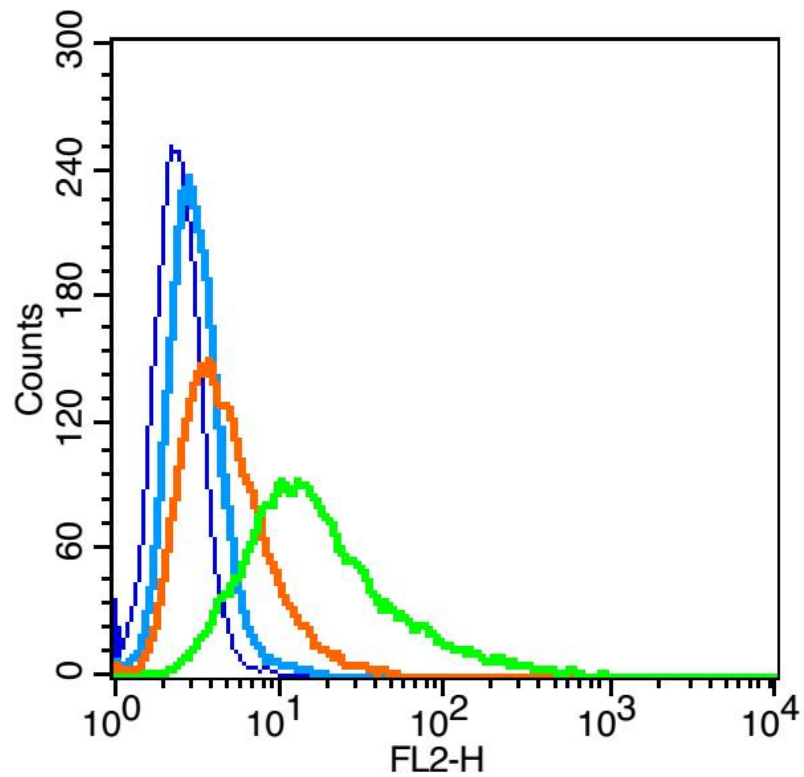
Observed band size: 138 kD



Tissue/cell: mouse kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block
endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal
goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-Nephryn Polyclonal Antibody, Unconjugated(SL10233R) 1:200,
overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and
DAB(C-0010) staining

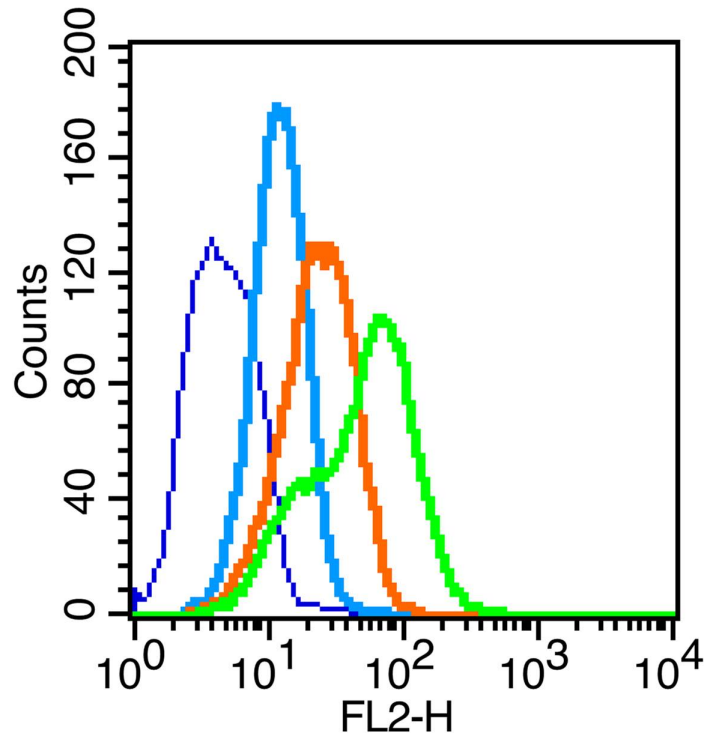


Tissue/cell: rat kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-Nephrin Polyclonal Antibody, Unconjugated(SL10233R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control: RSC96(blue), the cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with ice-cold 90% methanol for 30 min on ice.

Isotype Control Antibody: Rabbit IgG(orange) ; Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA ; Primary Antibody Dilution: 1 μ g in 100 μ L1X PBS containing 0.5% BSA(green).

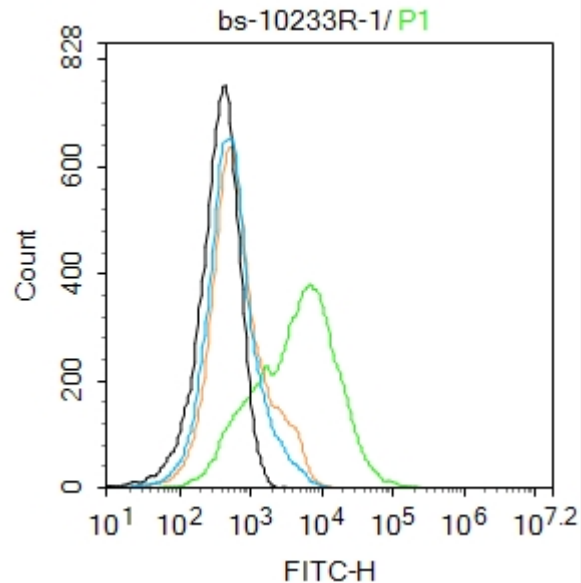


the cells(293T) were fixed with 2% paraformaldehyde (10 min).

Isotype Control Antibody: Rabbit IgG(orange) ; Secondary Antibody: Goat anti-rabbit

IgG-PE(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA ; Primary

Antibody Dilution: 1 μ g in 100 μ L1X PBS containing 0.5% BSA(green).



Blank control:293T.

Primary Antibody (green line): Rabbit Anti-Nephrin antibody (SL10233R)

Dilution: 1ug/Test;

Secondary Antibody : Goat anti-rabbit IgG-FITC

Dilution: 0.5ug/Test.

Protocol

The cells were incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature.

Acquisition of 20,000 events was performed.