abcam

ab216692

Anti-Nephrin antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Proclin 300 Constituents: 50% Glycerol (glycerin, glycerine), 48.98% TBS, 1X, 1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human NPHS1 aa 450-550 conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link O60500
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Rat
Dilution info	1/100
Notes	-

Expected

Species	Dog, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Dog
Dilution info	1/500
Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/100 - 1/500

Notes	-

Expected

Species	Rat, Dog
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Human
Dilution info	-
Notes	-

Target data

See full target information NPHS1

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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Nephrin also known as NPHS1 is a transmembrane protein with a molecular weight of approximately 180 kDa. Researchers have predominantly observed nephrin in the podocytes of the kidney glomerulus. Nephrin plays a mechanical role as part of the slit diaphragm a structure critical for maintaining the filtration barrier of the kidney. Its structure includes multiple immunoglobulin-like domains which facilitate cell signaling and adhesion processes important for podocyte function.
Biological function summary	Nephrin is essential for the regulation of glomerular permeability and podocyte foot process architecture. It serves as a significant component of the slit diaphragm complex working alongside proteins like podocin and CD2AP. This protein complex helps regulate the integrity and selectivity of the glomerular filtration barrier ensuring that blood plasma contents are selectively filtered while preventing the loss of large proteins into urine.
Pathways	Nephrin is integral to the PI3K/Akt signaling pathway influencing cell survival and cytoskeletal organization in podocytes. Nephrin's interaction within this pathway involves related proteins such as GAPDH and PTPRO which impact cellular functions critical to maintaining kidney structure and function. Additionally nephrin participates in the synaptopodin pathway modulating actin dynamics and therefore playing a role in cellular contraction and movement.
Associated diseases and disorders	Nephrin dysfunction is closely related to congenital nephrotic syndrome particularly Finnish-type nephrosis which results in significant proteinuria and kidney failure. Nephrin mutations or aberrant expression can also contribute to other glomerular diseases such as focal segmental glomerulosclerosis (FSGS). In these conditions nephrin's relationship with other proteins like neph1 and podocin becomes disrupted leading to loss of slit diaphragm integrity and impaired renal function.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

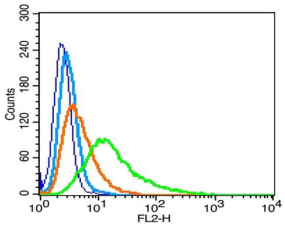
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

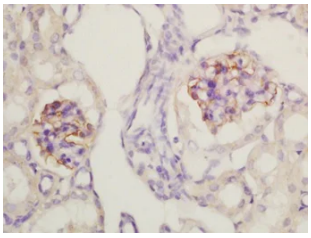
3 product images



Flow Cytometry - Anti-Nephrin antibody (ab216692)

Nephrin Flow Cytometry staining using rabbit Anti-Nephrin antibody

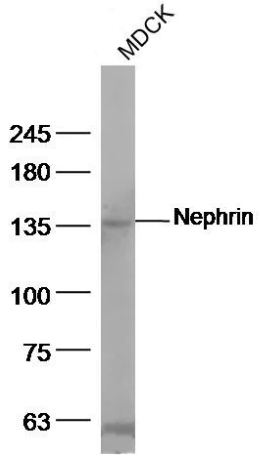
Flow cytometric analysis of rat RSC96 cells labeling Nephrin using ab216692 at 1/100 dilution for 30 minutes (green), followed by a PE conjugated secondary antibody compared to unstained cells (blue), secondary only (light blue) and isotype control (orange).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nephrin antibody (ab216692)

Nephrin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nephrin antibody

Immunohistochemical analysis of formalin-fixed and paraffin embedded mouse kidney tissue labeling Nephrin using ab216692 at 1/200 dilution, followed by conjugation to the secondary antibody and DAB staining.



Western blot - Anti-Nephrin antibody (ab216692)

All lanes:
Western blot - Anti-Nephrin antibody (ab216692) at 1/500 dilution

All lanes:
MDCK cell lysates

Predicted band size: 134 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.