abcam

ab136894

Anti-Nephrin antibody [Y17-R]

Anti-Nephrin antibody [Y17-R] (ab136894) is a rabbit monoclonal antibody detecting Nephrin in **Western Blot, Flow Cytometry**. Suitable for **Human, Mouse**.

- Over 20 publications

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 8 Preservative: 0.05% Sodium azide Constituents: 1% BSA, 0.32% Tris HCl
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human NPHS1 aa 450-550. The exact immunogen used to generate this antibody is proprietary information. Database link O60500
Clone number	Y17-R
Purification technique	Affinity purification Immunogen
Epitope	Antibody recognizes the epitope located between Cys465 - Cys528
Concentration	0.8 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	This immunoglobulin is the product of one single B-cell line from the crude anti-peptide polyclonal anti-serum. This antibody is purified using a proprietary technique and offers a completely post-translationally modified and properly glycosylated antibody. This offers increased stability.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/5000
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
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 conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-Nephrin antibody [Y17-R] (ab136894) is a rabbit monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt) in Human, Mouse samples.

What is the molecular weight of Nephrin?
Anti-Nephrin [Y17-R] (ab136894) specifically detects a band for Nephrin (UniProt: O60500) at a molecular weight of 134kDa.

Trusted by the scientific community
Anti-Nephrin [Y17-R] (ab136894) was first used in a scientific publication in 2012 and has been cited over 20 times in peer-reviewed journals.

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

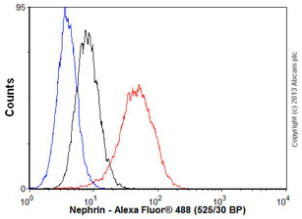
We do not recommend this combination. It is not covered by our product promise.

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.

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Terms & Conditions.

1 product image



Flow Cytometry - Anti-Nephrin antibody [Y17-R] (ab136894)

Nephrin Flow Cytometry staining using rabbit Anti-Nephrin antibody

Overlay histogram showing HEK293 cells stained with ab136894 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab136894, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was Alexa

Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive result in 80% methanol (5 min) fixed HEK293 cells used under the same conditions. Please note that Abcam do not have any data for use of this antibody on non-fixed cells. We welcome any customer feedback.

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