

nephrin (H-300): sc-28192

BACKGROUND

Nephrin is a member of the immunoglobulin family of cell adhesion molecules that localizes to opposing sites of the secondary foot processes formed by podocytes, a specialized epithelial cell that ensures size- and charge-selective ultrafiltration. The human nephrin gene maps to chromosome 19q13.12 and encodes a 1,241 amino acid protein that contains a transmembrane domain, 8 Ig-like modules, and one fibronectin III-like module. Nephrin is expressed in embryonic and adult kidneys and localizes to glomerular podocytes and the glomerular slit diaphragm. Nephrin stimulates mitogen-activated protein kinases and is enhanced by podocin, which binds to the cytoplasmic tail of nephrin. A293 cells treated with Phorbol-12-myristate-13-acetate can upregulate nephrin, suggesting that protein kinase C is part of an intracellular signalling system, which regulates nephrin.

CHROMOSOMAL LOCATION

Genetic locus: NPHS1 (human) mapping to 19q13.12; Nphs1 (mouse) mapping to 7 B1.

SOURCE

nephrin (H-300) is a rabbit polyclonal antibody raised against amino acids 23-322 mapping within an extracellular domain of nephrin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

nephrin (H-300) is recommended for detection of nephrin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

nephrin (H-300) is also recommended for detection of nephrin in additional species, including canine and bovine.

Suitable for use as control antibody for nephrin siRNA (h): sc-36030, nephrin siRNA (m): sc-36031, nephrin shRNA Plasmid (h): sc-36030-SH, nephrin shRNA Plasmid (m): sc-36031-SH, nephrin shRNA (h) Lentiviral Particles: sc-36030-V and nephrin shRNA (m) Lentiviral Particles: sc-36031-V.

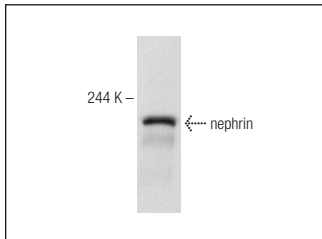
Molecular Weight of nephrin: 185 kDa.

Positive Controls: human kidney extract: sc-363764 or KNRK whole cell lysate: sc-2214.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



nephrin (H-300): sc-28192. Western blot analysis of nephrin expression in human kidney tissue extract.

SELECT PRODUCT CITATIONS

- Mao, J., et al. 2006. Expression profile of nephrin, podocin, and CD2AP in Chinese children with MCNS and IgA nephropathy. *Pediatr. Nephrol.* 21: 1666-1675.
- Facca, T.A., et al. 2012. Renal evaluation in women with preeclampsia. *Nephron Extra* 2: 125-132.
- Kerhoch, M., et al. 2012. Genetic inhibition of discoidin domain receptor 1 protects mice against crescentic glomerulonephritis. *FASEB J.* 26: 4079-4091.
- Tsai, I.J., et al. 2015. Inhibition of Rho-associated kinase relieves C5a-induced proteinuria in murine nephrotic syndrome. *Cell. Mol. Life Sci.* 72: 3157-3171.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **nephrin (G-8): sc-376522** or **nephrin (B-12): sc-377246**, our highly recommended monoclonal alternatives to nephrin (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **nephrin (G-8): sc-376522**.