

NEPH1 (T-15): sc-27970

BACKGROUND

Glomerular visceral epithelial cells, also known as podocytes, maintain the selective filtration barrier of the renal glomerulus. NEPH1, a member of the immuno-globulin superfamily, plays a critical role in functional barrier development. Loss of NEPH1 expression, like that of its structural relative nephrin, results in nephrotic syndromes and proteinuria leading to perinatal death. NEPH1 associates with nephrin as well as ZO-1 and localizes with them to the glomerular slit diaphragm. Interaction with nephrin occurs via the extracellular domain of NEPH1 and with ZO-1 in a PDZ binding motif of the cytoplasmic tail. Mutation of a putative threonine phosphorylation site within the cytoplasmic domain abrogates interaction with ZO-1, implying that phosphorylation regulates this interaction, and may effect the recruitment of the appropriate signal transduction components to the complex.

CHROMOSOMAL LOCATION

Genetic locus: KIRREL (human) mapping to 1q23.1; Kirrel (mouse) mapping to 3 F1.

SOURCE

NEPH1 (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of NEPH1 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.

Blocking peptide available for competition studies, sc-27970 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

NEPH1 (T-15) is recommended for detection of NEPH1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NEPH1 (T-15) is also recommended for detection of NEPH1 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for NEPH1 siRNA (h): sc-44769, NEPH1 siRNA (m): sc-44770, NEPH1 shRNA Plasmid (h): sc-44769-SH, NEPH1 shRNA Plasmid (m): sc-44770-SH, NEPH1 shRNA (h) Lentiviral Particles: sc-44769-V and NEPH1 shRNA (m) Lentiviral Particles: sc-44770-V.

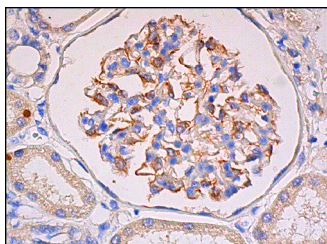
Molecular Weight of NEPH1: 90-110 kDa.

Positive Controls: mouse kidney extract: sc-2255.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



NEPH1 (T-15): sc-27970. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane staining of cells in glomeruli and faint cytoplasmic staining of cells in tubules.

RESEARCH USE

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

PROTOCOLS

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

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Try **NEPH1 (F-6): sc-373787**, our highly recommended monoclonal alternative to NEPH1 (T-15).