

# NEPH3 (Q-15): sc-70197

## BACKGROUND

NEPH3 (nephrin-like protein 3), also referred to as NLG1, FILTRIN or KIRREL2 (kin of IRRE like 2), is a 708 amino acid protein that is a member of the immunoglobulin superfamily of cell adhesion molecules. NEPH3 consists of five extracellular Ig-like repeats, a transmembrane domain, several glycosylation sites and a cytoplasmic domain that has a stretch of nine conserved residues. NEPH3 localizes to the interpodocyte filtration slit in the kidney and to the Langerhans islet beta cells in the pancreas. NEPH3 is thought to be involved in the maintenance of the glomerular filtration barrier in the kidney and in pancreas development. Downregulation of NEPH3 is implicated in several proteinuric diseases. Five isoforms exist due to alternative splicing events.

## REFERENCES

1. Ihalmo, P., et al. 2003. Filtrin is a novel member of nephrin-like proteins. *Biochem. Biophys. Res. Commun.* 300: 364-370.
2. Sun, C., et al. 2003. KIRREL2 a novel immunoglobulin superfamily gene expressed primarily in  $\beta$  cells of the pancreatic islets. *Genomics* 82: 130-142.
3. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607762. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Minaki, Y., et al. 2005. Migrating postmitotic neural precursor cells in the ventricular zone extend apical processes and form adherens junctions near the ventricle in the developing spinal cord. *Neurosci. Res.* 52: 250-262.
5. Serizawa, S., et al. 2006. A neuronal identity code for the odorant receptor-specific and activity-dependent axon sorting. *Cell* 127: 1057-1069.

## CHROMOSOMAL LOCATION

Genetic locus: KIRREL2 (human) mapping to 19q13.12; Kirrel2 (mouse) mapping to 7 B1.

## SOURCE

NEPH3 (Q-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of NEPH3 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-70197 P, (100  $\mu$ g 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.

## RESEARCH USE

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

## APPLICATIONS

NEPH3 (Q-15) is recommended for detection of NEPH3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Suitable for use as control antibody for NEPH3 siRNA (h): sc-75899, NEPH3 siRNA (m): sc-75900, NEPH3 shRNA Plasmid (h): sc-75899-SH, NEPH3 shRNA Plasmid (m): sc-75900-SH, NEPH3 shRNA (h) Lentiviral Particles: sc-75899-V and NEPH3 shRNA (m) Lentiviral Particles: sc-75900-V.

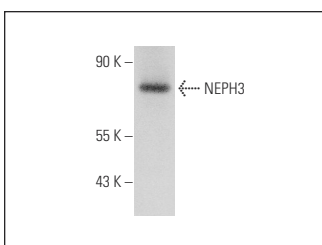
Molecular Weight of NEPH3: 107 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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 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<sup>™</sup> Mounting Medium: sc-24941.

## DATA



NEPH3 (Q-15): sc-70197. Western blot analysis of NEPH3 expression in KNRK whole cell lysate.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **NEPH3 (G-12): sc-515104** or **NEPH3 (5E6): sc-81795**, our highly recommended monoclonal alternatives to NEPH3 (Q-15).