SANTA CRUZ BIOTECHNOLOGY, INC.

NEPH3 (G-20): sc-70195

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 β 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 exists 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 β cells of the pancreatic islets. Genomics 82: 130-142.

CHROMOSOMAL LOCATION

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

SOURCE

NEPH3 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of NEPH3 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-70195 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NEPH3 (G-20) 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 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).

NDUFS4 (T-18) is also recommended for detection of NDUFS4 in additional species, including equine, canine, bovine and avian.

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.

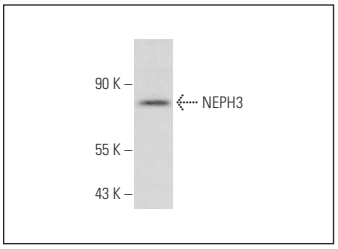
Molecular Weight of NEPH3: 107 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or Y79 cell lysate: sc-2240.

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) 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™ Mounting Medium: sc-24941.

DATA



NEPH3 (G-20): sc-70195. Western blot analysis of NEPH3 expression in Y79 whole cell lysate.

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.

PROTOCOLS

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