

nephrocystin-3 (H-300): sc-134745

BACKGROUND

The nephrocystin proteins comprise a family of five enzymes that commonly interact with p130Cas (BCAR1), proline-rich tyrosine kinases, calmodulin, and Tensin, indicating that these proteins may participate in a common signaling pathway. The NPHP3 gene encodes Nephrocystin-3, a protein that interacts with nephrocystin and may play a role in renal tubular function and development. Nephrocystin-3 contains a tubulin-tyrosine ligase (TTL) domain, a coiled-coil (CC) domain, and a tetratricopeptide repeat (TPR) domain. It is expressed widely at a low level, specifically in tissues such as the heart, placenta, liver, skeletal muscle, kidney and pancreas. In the brain and lung, Nephrocystin-3 is expressed at a very low level. Mutations in NPHP3 may cause nephronophthisis type 3, a recessive disorder affecting adolescents characterized by sclerosing tubulointerstitial nephropathy, alterations of tubular basement membranes, tubular atrophy and dilatation, and renal cyst development primarily at the corticomedullary junction. These symptoms lead to chronic renal failure in affected individuals.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: NPHP3 (human) mapping to 3q22.1; Nphp3 (mouse) mapping to 9 F1.

SOURCE

nephrocystin-3 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of nephrocystin-3 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.

APPLICATIONS

nephrocystin-3 (H-300) is recommended for detection of nephrocystin-3 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).

nephrocystin-3 (H-300) is also recommended for detection of nephrocystin-3 in additional species, including canine and bovine.

Suitable for use as control antibody for nephrocystin-3 siRNA (h): sc-61180, nephrocystin-3 siRNA (m): sc-61181, nephrocystin-3 shRNA Plasmid (h): sc-61180-SH, nephrocystin-3 shRNA Plasmid (m): sc-61181-SH, nephrocystin-3 shRNA (h) Lentiviral Particles: sc-61180-V and nephrocystin-3 shRNA (m) Lentiviral Particles: sc-61181-V.

Molecular Weight of nephrocystin-3: 148 kDa.

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.

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.


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Try **nephrocystin-3 (3B1): sc-517129**, our highly recommended monoclonal alternative to nephrocystin-3 (H-300).