SANTA CRUZ BIOTECHNOLOGY, INC.

Podocin (H-130): sc-21009

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The onset of autosomal recessive steroid-resistant nephrotic syndrome (SRN1) in humans occurs by early childhood. Characteristics of SRN1 include proteinuria, rapid progression to end-stage renal disease, and focal segmental glomerulosclerosis. The pathological conditions of SRN1 correlate well with mutations at the NPHS2 gene, where expression of a protein known as Podocin occurs. Abnormal or inefficient signaling through Podocin protein-dependent networks contributes to the development of podocyte dysfunction and proteinuria. The human NPHS2 gene maps to chromosome 1q25.2 and encodes a 383 amino acid protein. Podocin is an integral membrane protein that appears to fold into a hairpin-like structure with intracellular amino- and carboxy-termini. Transmembrane and cytoplasmic portions of Podocin share homology to the corresponding regions of the stomatin family proteins. Expression of high-order oligomers of Podocin in glomerular podocytes may reflect a scaffolding function that influences proper function of the glomerular filtration barrier, which is necessary for renal stability.

CHROMOSOMAL LOCATION

Genetic locus: NPHS2 (human) mapping to 1q25.2; Nphs2 (mouse) mapping to 1 G3.

SOURCE

Podocin (H-130) is a rabbit polyclonal antibody raised against amino acids 1-130 (deletion 30-61) mapping at the N-terminus of Podocin 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.

Available as agarose conjugate for immunoprecipitation, sc-21009 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

Podocin (H-130) is recommended for detection of Podocin 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).

Suitable for use as control antibody for Podocin siRNA (h): sc-40859, Podocin siRNA (m): sc-40860, Podocin shRNA Plasmid (h): sc-40859-SH, Podocin shRNA Plasmid (m): sc-40860-SH, Podocin shRNA (h) Lentiviral Particles: sc-40859-V and Podocin shRNA (m) Lentiviral Particles: sc-40860-V.

Molecular Weight of Podocin: 42 kDa.

Positive Controls: TE671 cell lysate: sc-2416, Caki-1 cell lysate: sc-2224 or rat cerebellum extract: sc-2398.

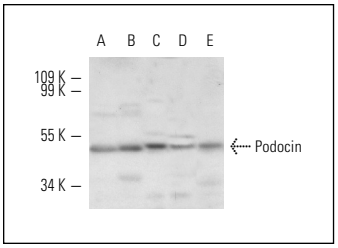
STORAGE

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

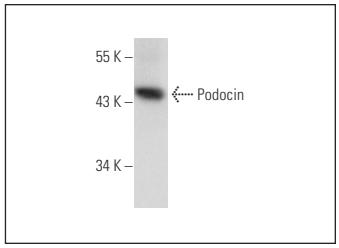
RESEARCH USE

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

DATA



Podocin (H-130): sc-21009. Western blot analysis of Podocin expression in TE671 (**A**) and Caki-1 (**B**) whole cell lysates and rat cerebellum (**C**), mouse cerebellum (**D**) and mouse kidney (**E**) tissue extracts.



Podocin (H-130): sc-21009. Western blot analysis of Podocin expression in TE671 whole cell lysate.

SELECT PRODUCT CITATIONS

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3. Boulberdaa, M., et al. 2011. Genetic inactivation of prokineticin receptor-1 leads to heart and kidney disorders. Arterioscler. Thromb. Vasc. Biol. 31: 842-850.
4. Chittiprol, S., et al. 2011. Marker expression, behaviors, and responses vary in different lines of conditionally immortalized cultured podocytes. Am. J. Physiol. Renal Physiol. 301: F660-F671.
5. Guimaraes-Souza, N.K., et al. 2012. *In vitro* reconstitution of human kidney structures for renal cell therapy. Nephrol. Dial. Transplant. 27: 3082-3090.
6. Ito, M., et al. 2012. Glycoprotein hyposialylation gives rise to a nephrotic-like syndrome that is prevented by sialic acid administration in GNE V572L point-mutant mice. PLoS ONE 7: e29873.
7. Nascimento, F.A., et al. 2012. Maternal vitamin D deficiency delays glomerular maturity in F1 and F2 offspring. PLoS ONE 7: e41740.
8. Ndisang, J.F. and Tiwari, S. 2014. Mechanisms by which heme oxygenase rescue renal dysfunction in obesity. Redox Biol. 2C: 1029-1037.
9. 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.