SANTA CRUZ BIOTECHNOLOGY, INC.

cadherin-16 (C-14): sc-46301

BACKGROUND

The cadherins are a family of Ca^{2+}-dependent adhesion molecules that function to mediate cell-cell binding critical to the maintenance of structure and morphogenesis. Cadherins each contain a large extracellular domain at the N-terminus, which is characterized by a series of five homologous repeats, the most distal of which is thought to be responsible for binding specificity. Cadherin-16, also known as Ksp-cadherin, is a type I membrane protein which is kidney-specific. Cadherin-16 is expressed exclusively in the basolateral membrane of renal tubular epithelial cells. The human Ksp-cadherin gene (cadherin-16) maps to chromosome 16q21-proximal 16q22.1. The mouse Ksp-cadherin gene was localized to a highly syntenic region of distal chromosome 8.

REFERENCES

1. Whyte, D.A., et al. 1999. Ksp-cadherin gene promoter. I. Characterization and renal epithelial cell-specific activity. Am. J. Physiol. 277: F587-F598.
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3. Jung, K.Y., et al. 2004. Loss of N-cadherin and α-catenin in the proximal tubules of aging male Fischer 344 rats. Mech. Ageing Dev. 125: 445-453.
4. Jiang, J., et al. 2004. Disruption of cadherin/catenin expression, localization, and interactions during HgCl2-induced nephrotoxicity. Toxicol. Sci. 80: 170-182.
5. Mazal, P.R., et al. 2005. Expression of kidney-specific cadherin distinguishes chromophobe renal cell carcinoma from renal oncocytoma. Hum. Pathol. 36: 22-28.
6. Shen, S.S., et al. 2005. Kidney-specific cadherin, a specific marker for the distal portion of the nephron and related renal neoplasms. Mod. Pathol. 18: 933-940.
7. Rakha, E.A., et al. 2005. High-resolution analysis of 16q22.1 in breast carcinoma using DNA amplifiable probes (multiplex amplifiable probe hybridization technique) and immunohistochemistry. Int. J. Cancer 114: 720-729.

CHROMOSOMAL LOCATION

Genetic locus: CDH16 (human) mapping to 16q22.1; Cdh16 (mouse) mapping to 8 D3.

SOURCE

cadherin-16 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of cadherin-16 of mouse 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-46301 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

cadherin-16 (C-14) is recommended for detection of cadherin-16 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for cadherin-16 siRNA (h): sc-45610, cadherin-16 siRNA (m): sc-45611, cadherin-16 shRNA Plasmid (h): sc-45610-SH, cadherin-16 shRNA Plasmid (m): sc-45611-SH, cadherin-16 shRNA (h) Lentiviral Particles: sc-45610-V and cadherin-16 shRNA (m) Lentiviral Particles: sc-45611-V.

Molecular Weight (predicted) of cadherin-16: 90 kDa.

Molecular Weight (observed) of cadherin-16: 84-131 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224.

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.

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.