SANTA CRUZ BIOTECHNOLOGY, INC.

Barttin (G-19): sc-49609

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The Power to Question

BACKGROUND

The BSND gene encodes Barttin, a protein comprised of two putative transmembrane α helices. Barttin expression is detected in the thin limb and thick ascending limb of the loop of Henle in the kidney, and in the dark cells of the inner ear. The BSND gene is mutated in Bartter syndrome, a genetic disease characterized by hypokalemia, metabolic alkalosis and normal to low blood pressure, which occurs with sensorineural deafness, irreversible hearing loss due to cochlear sensorineural or cochlear nerve damage. Barttin acts as an essential β subunit for CLCKNA and CLCKNB chloride channels, with which it co-localizes in basolateral membranes of renal tubules and of potassium-secreting epithelia of the inner ear. Mutations in either CLCKNB or Barttin compromise currents through heteromeric channels that can be stimulated further by mutating a proline-tyrosine (PY) motif on Barttin. Heteromers formed by chloride channels and Barttin are essential for renal salt reabsorption and potassium recycling in the inner ear.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: BSND (human) mapping to 1p32.3; Bsnd (mouse) mapping to 4 C7.

SOURCE

Barttin (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Barttin 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-49609 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Barttin (G-19) is recommended for detection of Barttin of mouse, rat and, to a lesser extent, 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).

Barttin (G-19) is also recommended for detection of Barttin in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Barttin siRNA (h): sc-60245, Barttin siRNA (m): sc-60246, Barttin shRNA Plasmid (h): sc-60245-SH, Barttin shRNA Plasmid (m): sc-60246-SH, Barttin shRNA (h) Lentiviral Particles: sc-60245-V and Barttin shRNA (m) Lentiviral Particles: sc-60246-V.

Molecular Weight of Barttin: 35 kDa.

Positive Controls: rat kidney extract: sc-2394.

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.