SANTA CRUZ BIOTECHNOLOGY, INC.

BTR1 (M-270): sc-67397

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

BTR1 (bicarbonate transporter-related protein 1), also known as sodium bicarbonate transporter-like protein 11, sodium-coupled borate cotransporter 1 (NaBC1) or solute carrier family 4 member 11 (SLC4A11), belongs to the anion exchanger family of proteins. BTR1 is ubiquitously expressed, localizes to the plasma membrane and exists as a multi-pass membrane protein. It functions as an electrogenic Na^+-dependent borate transporter and is essential for cell growth, proliferation and borate homeostasis. In the absence of borate, BTR1 functions as a conductive transporter, permeable to Na^+ and H^+. Several different mutations in BTR1 result in recessive congenital hereditary endothelial dystrophy (CHED2), a rare eye disorder characterized by corneal opacification and involuntary eye movement (nystagmus).

REFERENCES

1. Parker, M.D., et al. 2001. Human BTR1, a new bicarbonate transporter superfamily member and human AE4 from kidney. Biochem. Biophys. Res. Commun. 282: 1103-1109.
2. Romero, M.F., et al. 2004. The SLC4 family of HCO_3-transporters. Pflugers Arch. 447: 495-509.
3. Park, M., et al. 2004. NaBC1 is a ubiquitous electrogenic Na^+-coupled borate transporter essential for cellular boron homeostasis and cell growth and proliferation. Mol. Cell 16: 331-341.
4. Romero, M.F. 2005. Molecular pathophysiology of SLC4 bicarbonate transporters. Curr. Opin. Nephrol. Hypertens. 14: 495-501.
5. Park, M., et al. 2005. Borate transport and cell growth and proliferation. Not only in plants. Cell Cycle 4: 24-26.
6. Vithana, E.N., et al. 2006. Mutations in sodium-borate cotransporter SLC4A11 cause recessive congenital hereditary endothelial dystrophy (CHED2). Nat. Genet. 38: 755-757.

CHROMOSOMAL LOCATION

Genetic locus: SLC4A11 (human) mapping to 20p13; Slc4a11 (mouse) mapping to 2 F1.

SOURCE

BTR1 (M-270) is a rabbit polyclonal antibody raised against amino acids 51-320 mapping near the N-terminus of BTR1 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.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

BTR1 (M-270) is recommended for detection of BTR1 of mouse, rat and, to a lesser extent, 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).

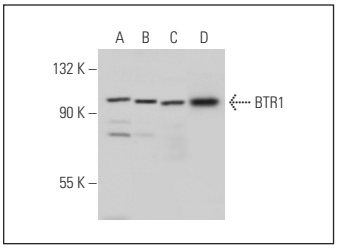
Suitable for use as control antibody for BTR1 siRNA (h): sc-62026, BTR1 siRNA (m): sc-62027, BTR1 shRNA Plasmid (h): sc-62026-SH, BTR1 shRNA Plasmid (m): sc-62027-SH, BTR1 shRNA (h) Lentiviral Particles: sc-62026-V and BTR1 shRNA (m) Lentiviral Particles: sc-62027-V.

Molecular Weight of BTR1: 100 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.

DATA



BTR1 (M-270): sc-67397. Western blot analysis of BTR1 expression in A549 (**A**), HEK293 (**B**) and HeLa (**C**) whole cell lysates and human testis tissue extract (**D**).

RESEARCH USE

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