SANTA CRUZ BIOTECHNOLOGY, INC.

BIG1 (H-200): sc-50391

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Guanine nucleotide-exchange proteins (GEPs) accelerate replacement of bound GDP with GTP and thereby activate ADP-ribosylation factors (ARFs), a family of guanine nucleotide-binding proteins that play an important role in intracellular vesicular trafficking. GEPs comprise two major families, large GEPs that are inhibited by brefeldin A (BFA), a protein that effects Golgi structure, and a group of smaller GEPs that are insenstive to BFA. Two genes for GEPs found on human chromosomes 8 and 20 encode BFA sensitive GEPs, designated BIG1 and BIG2. Both GEPS contain a sec7 domain that is responsible for their brefeldin inhibition and also their catalytic activity. *In vivo,* BIG1 and BIG2 exist in macromolecular complexes that move between the Golgi membranes and cytosol. BIG2 associates with PKA regulatory subunits, implying that BIG2 may act as an A kinase-anchoring protein (AKAP) that could coordinate the cAMP and ARF regulatory pathways.

CHROMOSOMAL LOCATION

Genetic locus: ARFGEF1 (human) mapping to 8q13.2; Arfgef1 (mouse) mapping to 1 A2.

SOURCE

BIG1 (H-200) is a rabbit polyclonal antibody raised against amino acids 285-419 mapping within an internal region of BIG1 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.

STORAGE

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

APPLICATIONS

BIG1 (H-200) is recommended for detection of BIG1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BIG1 (H-200) is also recommended for detection of BIG1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for BIG1 siRNA (h): sc-43632, BIG1 siRNA (m): sc-44440, BIG1 shRNA Plasmid (h): sc-43632-SH, BIG1 shRNA Plasmid (m): sc-44440-SH, BIG1 shRNA (h) Lentiviral Particles: sc-43632-V and BIG1 shRNA (m) Lentiviral Particles: sc-44440-V.

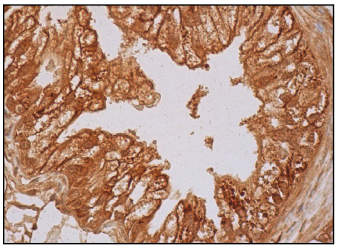
Molecular Weight of BIG1: 209 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



BIG1 (H-200): sc-50391. Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing cytoplasmic, membrane and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Xu, Z., et al. 2009. A role of histone H3 lysine 4 methyltransferase components in endosomal trafficking. J. Cell Biol. 186: 343-353.
2. Christis, C. and Munro, S. 2012. The small G protein Arl1 directs the *trans*-Golgi-specific targeting of the Arf1 exchange factors BIG1 and BIG2. J. Cell Biol. 196: 327-335.

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.