BXDC5 (H-69): sc-98297

SANTA CRUZ®

BIOTECHNOLOGY

The Power to Question

BACKGROUND

BXDC5 (Brix domain-containing protein 5), also designated Ribosome biogenesis protein RPF1, is a 349 amino acid protein that contains one Brix domain and localizes to the nucleolus. Brix domain containing proteins represent a family of proteins involved in the biogenesis of large ribosomal subunits. The Brix domain is a region with homology to the yeast protein Pitx1 (ribosome biogenesis protein BRX1). Pitx1 is a member of a complex that includes RPF1, RPF2 and SSF1 or SSF2, which is required for the biogenesis of the 60S ribosomal subunit in yeast. The gene encoding BXDC5 maps to human chromosome 1, which is the largest human chromosome spanning about 260 million base pairs. Aberrations in chromosome 1 are found in a variety of cancers including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Kaser, A., et al. 2001. Brix from xenopus laevis and brx1p from yeast define a new family of proteins involved in the biogenesis of large ribosomal subunits. Biol. Chem. 382: 1637-1647.

2. Morita, D., et al. 2002. Rpf2p, an evolutionarily conserved protein, interacts with ribosomal protein L11 and is essential for the processing of 27 SB Pre-rRNA to 25 S rRNA and the 60 S ribosomal subunit assembly in Saccharomyces cerevisiae. J. Biol. Chem. 277: 28780-28786.

3. Bogengruber, E., et al. 2003. Functional analysis in yeast of the Brix protein superfamily involved in the biogenesis of ribosomes. FEMS Yeast Res. 3: 35-43.

4. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. Cytogenet. Genome Res. 108: 217-222.

5. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.

6. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. Anticancer Res. 26: 953-959.

CHROMOSOMAL LOCATION

Genetic locus: RPF1 (human) mapping to 1p22.3; Rpf1 (mouse) mapping to 3 H2.

SOURCE

BXDC5 (H-69) is a rabbit polyclonal antibody raised against amino acids 85-153 mapping within an internal region of BXDC5 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.

RESEARCH USE

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

APPLICATIONS

BXDC5 (H-69) is recommended for detection of BXDC5 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 BXDC5 siRNA (h): sc-88492, BXDC5 siRNA (m): sc-105132, BXDC5 shRNA Plasmid (h): sc-88492-SH, BXDC5 shRNA Plasmid (m): sc-105132-SH, BXDC5 shRNA (h) Lentiviral Particles: sc-88492-V and BXDC5 shRNA (m) Lentiviral Particles: sc-105132-V.

Molecular Weight of BXDC5: 40 kDa.

Positive Controls: DU 145 cell lysate: sc-2268 or PC-3 cell lysate: sc-2220.

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
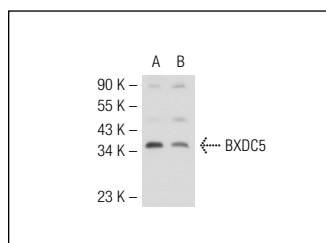
BXDC5 (H-69): sc-98297. Western blot analysis of BXDC5 expression in DU 145 (**A**) and PC-3 (**B**) nuclear extracts.

PROTOCOLS

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