

BXDC2 (C-1): sc-373680

The Power to Question

BACKGROUND

BXDC2 (Brix domain-containing protein 2) is a 306 amino acid protein encoded by the human gene BXDC2. BXDC2 is a nuclear protein that contains one Brix domain. Brix domain containing proteins represent a family of proteins involved in the biogenesis of large ribosomal subunits. The Brix domain is a region that is homologous to the yeast protein Pitx1 (ribosome biogenesis protein BRX1). Pitx1 is part of a complex that includes BXDC5, BXDC1 and PPAN. This complex is required for the biogenesis of the 60S ribosomal subunit. BXDC2 exhibits the same functions as Pitx1.

REFERENCES

1. Strezoska, Z., et al. 2000. BOP1 is a mouse WD40 repeat nucleolar protein involved in 28S and 5.8S rRNA processing and 60S ribosome biogenesis. *Mol. Cell. Biol.* 20: 5516-5528.
2. Sasaki, T., et al. 2000. Yeast KRR1p physically and functionally interacts with a novel essential KRI1p, and both proteins are required for 40S ribosome biogenesis in the nucleolus. *Mol. Cell. Biol.* 20: 7971-7979.
3. Kaser, A., et al. 2002. 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.

CHROMOSOMAL LOCATION

Genetic locus: BRX1 (human) mapping to 5p13.2; Brix1 (mouse) mapping to 15 A1.

SOURCE

BXDC2 (C-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 299-332 near the C-terminus of BXDC2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BXDC2 (C-1) is available conjugated to agarose (sc-373680 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373680 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373680 PE), fluorescein (sc-373680 FITC), Alexa Fluor® 488 (sc-373680 AF488), Alexa Fluor® 546 (sc-373680 AF546), Alexa Fluor® 594 (sc-373680 AF594) or Alexa Fluor® 647 (sc-373680 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373680 AF680) or Alexa Fluor® 790 (sc-373680 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-373680 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

BXDC2 (C-1) is recommended for detection of BXDC2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

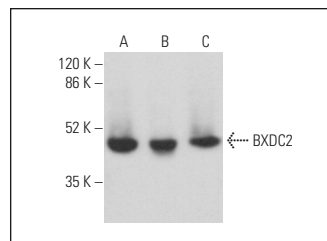
Suitable for use as control antibody for BXDC2 siRNA (h): sc-91590, BXDC2 siRNA (m): sc-141793, BXDC2 shRNA Plasmid (h): sc-91590-SH, BXDC2 shRNA Plasmid (m): sc-141793-SH, BXDC2 shRNA (h) Lentiviral Particles: sc-91590-V and BXDC2 shRNA (m) Lentiviral Particles: sc-141793-V.

Molecular Weight of BXDC2: 41 kDa.

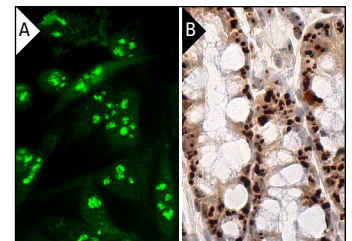
Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or MCF7 whole cell lysate: sc-2206.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA

BXDC2 (C-1): sc-373680. Western blot analysis of BXDC2 expression in MCF7 (A), Hep G2 (B) and K-562 (C) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



BXDC2 (C-1): sc-373680. Immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing nucleolar and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Jiang, G., et al. 2021. Identification of BXDC2 as a key downstream effector of the androgen receptor in modulating cisplatin sensitivity in bladder cancer. *Cancers* 13: 975.

RESEARCH USE

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