

# BXDC2 (C-1): sc-373680

## 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. 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.

## 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 IgG<sub>1</sub> 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).

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## 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.

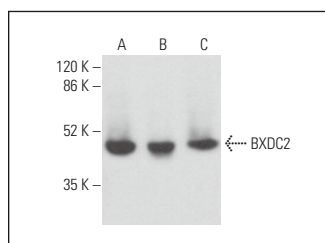
Molecular Weight of BXDC2: 41 kDa.

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

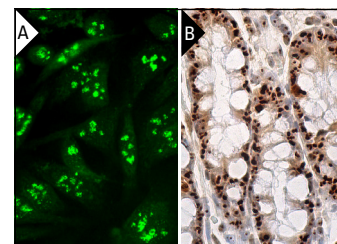
## RECOMMENDED SUPPORT REAGENTS

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 nucleolar 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.