SANTA CRUZ BIOTECHNOLOGY, INC.

Bex2 (C-12): sc-398486

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The brain-expressed X-linked (Bex) family of proteins is expressed in the central nervous system, with highest levels detected in cerebellum, temporal lobe and pituitary tissues. Bex1 plays an important role in neuronal differentiation in response to nerve growth factor (NGF), as well as in cell cycle progression. Bex1 is a highly ubiquitinated protein and acts as a link between the cell cycle and neurotrophic factor signaling. Bex2 is highly expressed in the embryonic brain and interacts with LMO2, a LIM domain-containing transcriptional factor, thereby regulating the transcriptional activity of a DNA-binding complex. Bex1 and Bex2 shuttle between the cytoplasm and the nucleus. Bex2 may be implicated in tumor formation, since upregulation leads to increased sensitivity to chemotherapy-induced apoptosis. Bex2 also exhibits powerful tumor suppressor effects.

REFERENCES

1. Brown, A.L. and Kay, G.F. 1999. Bex1, a gene with increased expression in parthenogenetic embryos, is a member of a novel gene family on the mouse X chromosome. Hum. Mol. Genet. 8: 611-619.
2. Williams, J.W., et al. 2002. Trophectoderm-specific expression of the X-linked Bex1/Rex3 gene in preimplantation stage mouse embryos. Mol. Reprod. Dev. 61: 281-287.

CHROMOSOMAL LOCATION

Genetic locus: BEX2 (human) mapping to Xq22.1; Bex2 (mouse) mapping to X F1.

SOURCE

Bex2 (C-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 3-22 at the N-terminus of Bex2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Bex2 (C-12) is available conjugated to agarose (sc-398486 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398486 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398486 PE), fluorescein (sc-398486 FITC), Alexa Fluor® 488 (sc-398486 AF488), Alexa Fluor® 546 (sc-398486 AF546), Alexa Fluor® 594 (sc-398486 AF594) or Alexa Fluor® 647 (sc-398486 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398486 AF680) or Alexa Fluor® 790 (sc-398486 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398486 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Bex2 (C-12) is recommended for detection of Bex2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Bex2 siRNA (h): sc-60271, Bex2 siRNA (m): sc-60272, Bex2 shRNA Plasmid (h): sc-60271-SH, Bex2 shRNA Plasmid (m): sc-60272-SH, Bex2 shRNA (h) Lentiviral Particles: sc-60271-V and Bex2 shRNA (m) Lentiviral Particles: sc-60272-V.

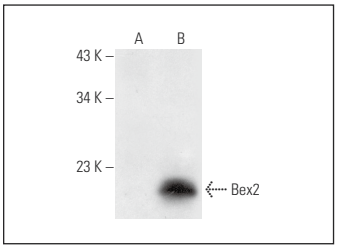
Molecular Weight of Bex2: 15 kDa.

Positive Controls: Bex2 (h): 293 Lysate: sc-113220.

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.

DATA



Bex2 (C-12): sc-398486. Western blot analysis of Bex2 expression in non-transfected: sc-110760 (**A**) and human Bex2 transfected: sc-113220 (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Tamai, K., et al. 2020. Bex2 suppresses mitochondrial activity and is required for dormant cancer stem cell maintenance in intrahepatic cholangiocarcinoma. Sci. Rep. 10: 21592.
2. Manford, A.G., et al. 2021. Structural basis and regulation of the reductive stress response. Cell 184: 5375-5390.e16.
3. Fukushi, D., et al. 2021. Bex2 is required for maintaining dormant cancer stem cell in hepatocellular carcinoma. Cancer Sci. 112: 4580-4592.

RESEARCH USE

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