SANTA CRUZ BIOTECHNOLOGY, INC.

Bex1/2 (D-6): sc-376342

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 interacts with LMO2, thereby regulating the transcriptional activity of a DNA-binding complex. Bex1 and Bex 2 are widely expressed outside of the central nervous system with high expression in the liver. Bex1 and Bex2 shuttle between the cytoplasm and the nucleus. Though the role of Bex1 is largely unknown, it may function by coordinating internal cellular states with the ability of cells to respond to external signals.

CHROMOSOMAL LOCATION

Genetic locus: BEX1/BEX2 (human) mapping to Xq22.1; Bex1/Bex2 (mouse) mapping to X F1.

SOURCE

Bex1/2 (D-6) is a mouse monoclonal antibody raised against amino acids 39-110 mapping within an internal region of Bex1 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.

Bex1/2 (D-6) is available conjugated to agarose (sc-376342 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376342 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376342 PE), fluorescein (sc-376342 FITC), Alexa Fluor® 488 (sc-376342 AF488), Alexa Fluor® 546 (sc-376342 AF546), Alexa Fluor® 594 (sc-376342 AF594) or Alexa Fluor® 647 (sc-376342 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376342 AF680) or Alexa Fluor® 790 (sc-376342 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

Bex1/2 (D-6) is recommended for detection of Bex1 and 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), 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).

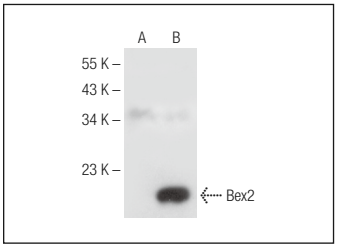
Molecular Weight of Bex1/2: 15 kDa.

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

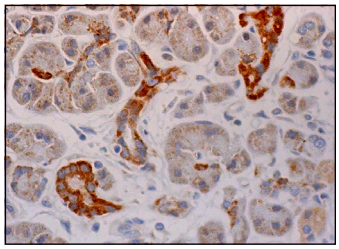
RECOMMENDED SUPPORT REAGENTS

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. 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



Bex1/2 (D-6): sc-376342. Western blot analysis of Bex2 expression in non-transfected: sc-110760 (**A**) and human Bex2 transfected: sc-113220 (**B**) 293 whole cell lysates.



Bex1/2 (D-6): sc-376342. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells and pancreatic duct cells.

SELECT PRODUCT CITATIONS

1. Judd, J., et al. 2019. Defined factors to reactivate cell cycle activity in adult mouse cardiomyocytes. Sci. Rep. 9: 18830.
2. Wang, X., et al. 2019. MicroRNA-370 functions as a tumor suppressor in hepatocellular carcinoma via inhibition of the MAPK/JNK signaling pathway by targeting Bex2. J. Hum. Genet. 64: 1203-1217.
3. Fukushi, D., et al. 2021. Bex2 is required for maintaining dormant cancer stem cell in hepatocellular carcinoma. Cancer Sci. 112: 4580-4592.
4. Yasumoto, A., et al. 2023. BEX2 is poor prognostic factor and required for cancer stemness in gastric cancer. Biochem. Biophys. Res. Commun. 655: 59-67.
5. Zhuang, N., et al. 2023. BEX1 mediates sorafenib resistance in hepatocellular carcinoma by regulating AKT signaling. Cell. Signal. 108: 110722.

RESEARCH USE

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

PROTOCOLS

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