SANTA CRUZ BIOTECHNOLOGY, INC.

Pbx 2 (G-20): sc-890

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pbx 1, 2, 3 and 4 are members of the TALE (three amino acid loop extension) family of homeodomain-containing proteins. Human pre-B cell acute leukemias are frequently associated with a t(1;19)(q23;p13.3) chromosomal rearrangement which creates a chimeric gene encoding a fusion between the E2A and Pbx 1 gene products. Pbx 2 and Pbx 3 share 92% and 94% respective identities with Pbx 1 over a 266 amino acid region flanking their homeobox domains, while all 3 proteins are quite divergent at their amino and carboxy termini. Two forms of Pbx 1 and Pbx 3 each differ primarily in their carboxy termini and result from alternative mRNA splicings. Unlike other hometic selector genes which are expressed transiently during development and differentiation, Pbx gene transcripts are ubiquitously expressed in both fetal and adult tissues and cell lines. Additionally, Pbx 2 and Pbx 3 transcripts are detected in lymphoid cells, which do not express Pbx 1. Pbx 4 expressions is confined to the testis, especially to spermatocytes in the pachytene stage of the first meiotic prophase.

CHROMOSOMAL LOCATION

Genetic locus: PBX2 (human) mapping to 6p21.32; Pbx2 (mouse) mapping to 17 B1.

SOURCE

Pbx 2 (G-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of Pbx 2 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-890 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-890 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Pbx 2 (G-20) is recommended for detection of Pbx 2 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), 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 Pbx 2 siRNA (h): sc-38798, Pbx 2 siRNA (m): sc-38799, Pbx 2 shRNA Plasmid (h): sc-38798-SH, Pbx 2 shRNA Plasmid (m): sc-38799-SH, Pbx 2 shRNA (h) Lentiviral Particles: sc-38798-V and Pbx 2 shRNA (m) Lentiviral Particles: sc-38799-V.

Pbx 2 (G-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

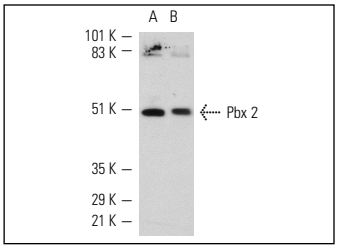
Molecular Weight of Pbx 2: 46 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, BJAB whole cell lysate: sc-2207 or Ramos cell lysate: sc-2216.

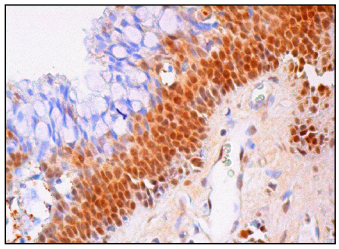
STORAGE

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

DATA



Pbx 2 (G-20): sc-890. Western blot analysis of Pbx 2 expression in Jurkat (**A**) and Ramos (**B**) whole cell lysates.



Pbx 2 (G-20): sc-890. Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing nuclear staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

1. Knoepfler, P.S., et al. 1997. The highest affinity DNA element bound by Pbx complexes in t (1;19) leukemic cells fails to mediate cooperative DNA binding or cooperative transactivation by E2a-Pbx 1 and Class I Hox proteins-evidence for selective targetting of E2a-Pbx 1 to a subset of Pbx recognition elements. Oncogene 14: 2521-2531.
2. Beaudet, M.J., et al. 2005. The CYP2B2 phenobarbital response unit contains binding sites for hepatocyte nuclear factor 4, PBX-PREP1, the thyroid hormone receptor β and the liver X receptor. Biochem. J. 388: 407-418.
3. Ota, T., et al. 2008. Hox cofactors expression and regulation in the human ovary. Reprod. Biol. Endocrinol. 6: 49.
4. Wright, E.K., et al. 2008. Prep1/Pbx2 complexes regulate CCL2 expression through the -2578 guanine polymorphism. Genes Immun. 9: 419-430.
5. Capellini, T.D., et al. 2008. Pbx1/Pbx2 govern axial skeletal development by controlling Polycomb and Hox in mesoderm and Pax1/Pax9 in sclerotome. Dev. Biol. 321: 500-514.
6. Ferretti, E., et al. 2011. A conserved Pbx-Wnt-p63-Irf6 regulatory module controls face morphogenesis by promoting epithelial apoptosis. Dev. Cell 21: 627-641.
7. Koss, M., et al. 2012. Congenital asplenia in mice and humans with mutations in a Pbx/Nkx2-5/p15 module. Dev. Cell 22: 913-926.

RESEARCH USE

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