

Pbx 1 (P-20): sc-889

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 splicing. Unlike other homeotic 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 expression is confined to the testis, especially to spermatocytes in the pachytene stage of the first meiotic prophase.

CHROMOSOMAL LOCATION

Genetic locus: PBX1 (human) mapping to 1q23.3; Pbx1 (mouse) mapping to 1 H2.3.

SOURCE

Pbx 1 (P-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of Pbx 1 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-889 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-889 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Pbx 1 (P-20) is recommended for detection of Pbx 1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Pbx 1 (P-20) is also recommended for detection of Pbx 1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Pbx 1 siRNA (h): sc-38796, Pbx 1 siRNA (m): sc-38797, Pbx 1 shRNA Plasmid (h): sc-38796-SH, Pbx 1 shRNA Plasmid (m): sc-38797-SH, Pbx 1 shRNA (h) Lentiviral Particles: sc-38796-V and Pbx 1 shRNA (m) Lentiviral Particles: sc-38797-V.

Pbx 1 (P-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

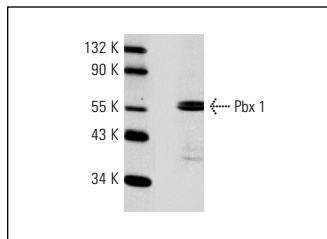
Molecular Weight of Pbx 1: 47 kDa.

Positive Controls: KNRK nuclear extract: sc-2141.

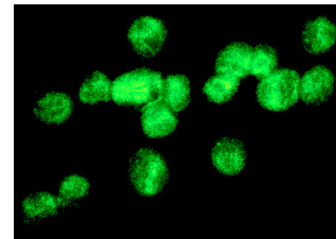
STORAGE

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

DATA



Pbx 1 (P-20): sc-889. Western blot analysis of Pbx 1 expression in KNRK nuclear extract.



Pbx 1 (P-20): sc-889. Immunofluorescence staining of methanol-fixed KNRK cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Shen, W.F., et al. 1999. HoxA9 forms triple complexes with Pbx 2 and Meis1 in myeloid cells. *Mol. Cell. Biol.* 19: 3051-3061.
- Lampe, X., et al. 2008. An ultraconserved Hox-Pbx responsive element resides in the coding sequence of Hoxa2 and is active in rhombomere 4. *Nucleic Acids Res.* 36: 3214-3225.
- Goh, S.L., et al. 2009. Transcriptional activation by MEIS1A in response to protein kinase A signaling requires the transducers of regulated CREB family of CREB co-activators. *J. Biol. Chem.* 284: 18904-18912.
- McCarthy, V.A., et al. 2009. Nov-Dec. Interaction of intestinal and pancreatic transcription factors in the regulation of CFTR gene expression. *Biochim. Biophys. Acta* 1789: 709-718.
- Gordon, J.A., et al. 2010. Pbx1 represses osteoblastogenesis by blocking Hoxa10-mediated recruitment of chromatin remodeling factors. *Mol. Cell. Biol.* 30: 3531-3541.
- Gordon, J.A., et al. 2011. Epigenetic regulation of early osteogenesis and mineralized tissue formation by a HOXA10-PBX1-associated complex. *Cells Tissues Organs* 194: 146-150.
- Municio, C., et al. 2011. Apoptotic cells enhance IL-10 and reduce IL-23 production in human dendritic cells treated with zymosan. *Mol. Immunol.* 49: 97-106.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **Pbx 1/2/3/4 (F-3): sc-28313** or **Pbx 1/2/3/4 (E-12): sc-48423**, our highly recommended monoclonal alternatives to Pbx 1 (P-20).