

Pbx 3 (D-17): sc-891

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: PBX3 (human) mapping to 9q33.3; Pbx3 (mouse) mapping to 2 B.

SOURCE

Pbx 3 (D-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of Pbx 3 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-891 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-891 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Pbx 3 (D-17) is recommended for detection of Pbx 3 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 3 (D-17) is also recommended for detection of Pbx 3 in additional species, including bovine and avian.

Suitable for use as control antibody for Pbx 3 siRNA (h): sc-38800, Pbx 3 siRNA (m): sc-38801, Pbx 3 shRNA Plasmid (h): sc-38800-SH, Pbx 3 shRNA Plasmid (m): sc-38801-SH, Pbx 3 shRNA (h) Lentiviral Particles: sc-38800-V and Pbx 3 shRNA (m) Lentiviral Particles: sc-38801-V.

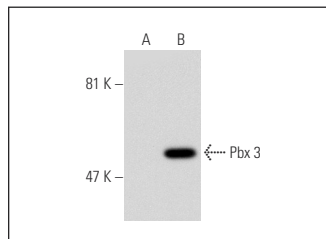
Pbx 3 (D-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Pbx 3: 47 kDa.

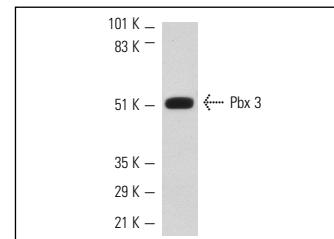
STORAGE

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

DATA



Pbx 3 (D-17): sc-891. Western blot analysis of Pbx 3 expression in non-transfected: sc-117752 (A) and human Pbx 3 transfected: sc-111640 (B) 293T whole cell lysates.



Pbx 3 (D-17): sc-891. Western blot analysis of Pbx 3 expression in KNRK nuclear extract.

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.
- Okada, Y., et al. 2003. Homeodomain proteins Meis1 and Pbx3 regulate the lineage-specific transcription of the platelet factor 4 gene. *Blood* 101: 4748-4756.
- Sarno, J.L., et al. 2005. Hoxa10, Pbx 2, and Meis1 protein expression in the human endometrium: formation of multimeric complexes on Hoxa10 target genes. *J. Clin. Endocrinol. Metab.* 90: 522-528.
- 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.
- Sgadò, P., et al. 2012. The atypical homeoprotein Pbx1a participates in the axonal pathfinding of mesencephalic dopaminergic neurons. *Neural Dev.* 7: 24.
- Pelosi, A., et al. 2012. miRNA let-7c promotes granulocytic differentiation in acute myeloid leukemia. *Oncogene* 32: 3648-3654.

RESEARCH USE

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

PROTOCOLS

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

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Try **Pbx 3 (39-K): sc-81988**, our highly recommended monoclonal alternative to Pbx 3 (D-17).