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PBX1 Rabbit pAb

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Catalog # AP54814

Product Information

Application	WB
Primary Accession	P40424
Reactivity	Rat, Human, Mouse
Predicted	Dog, Rabbit, Zebrafish, Chicken, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	46626
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from Human PBX1
Epitope Specificity	221-340/430
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus.
DISEASE	Note=A chromosomal aberration involving PBX1 is a cause of pre-B-cell acute lymphoblastic leukemia (B-ALL). Translocation t(1;19)(q23;p13.3) with TCF3. E2A-PBX1 transforms cells by constitutively activating transcription of genes regulated by PBX1 or by other members of the PBX protein family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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 three 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.

Additional Information

Gene ID	5087
Other Names	Pre-B-cell leukemia transcription factor 1, Homeobox protein PBX1,

	Homeobox protein PRL, PBX1, PRL
Dilution	WB=1:500-2000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

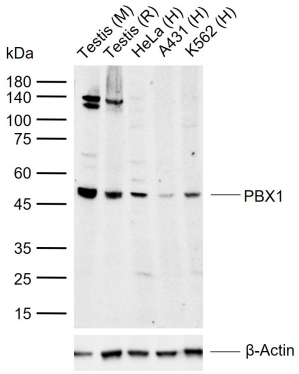
Name	PBX1
Synonyms	PRL
Function	Transcription factor which binds the DNA sequence 5'- TGATTGAT-3' as part of a heterodimer with HOX proteins such as HOXA1, HOXA5, HOXB7 and HOXB8 (PubMed:9191052). Binds to the DNA sequence 5'- TGATTGAC-3' in complex with a nuclear factor which is not a class I HOX protein (PubMed:9191052). Has also been shown to bind the DNA sequence 5'-ATCAATCAA-3' cooperatively with HOXA5, HOXB7, HOXB8, HOXC8 and HOXD4 (PubMed:7791786, PubMed:8327485). Acts as a transcriptional activator of PF4 in complex with MEIS1 (PubMed:12609849). Also activates transcription of SOX3 in complex with MEIS1 by binding to the 5'-TGATTGAC-3' consensus sequence (By similarity). In natural killer cells, binds to the NFIL3 promoter and acts as a transcriptional activator of NFIL3, promoting natural killer cell development (By similarity). Plays a role in the cAMP-dependent regulation of CYP17A1 gene expression via its cAMP-regulatory sequence (CRS1) (By similarity). Probably in complex with MEIS2, involved in transcriptional regulation by KLF4 (PubMed:21746878). Acts as a transcriptional activator of NKX2-5 and a transcriptional repressor of CDKN2B (By similarity). Together with NKX2-5, required for spleen development through a mechanism that involves CDKN2B repression (By similarity).
Cellular Location	Nucleus.
Tissue Location	Expressed in the kidney. Expressed in the endothelial cells of the glomeruli and interstitium (at protein level) (PubMed:28270404). Expressed in all tissues except in cells of the B and T lineage. Expressed strongly in kidney and brain (PubMed:28270404).

Background

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Images

Sample:
Lane 1: Mouse Testis tissue lysates
Lane 2: Rat Testis tissue lysates
Lane 3: Human HeLa cell lysates
Lane 4: Human A431 cell lysates
Lane 5: Human A549 cell lysates
Primary: Anti-PBX1 (AP54814) at 1/1000 dilution



Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 47 kDa
Observed band size: 50 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.