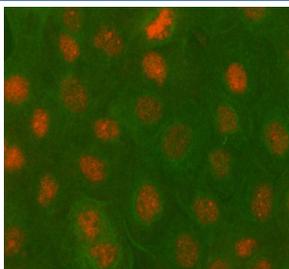


## PBX4 Antibody / Pre-B-cell leukemia transcription factor 4 (FY12366)

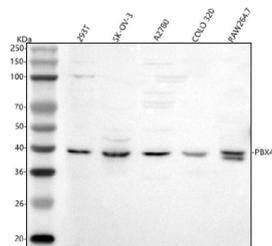
Catalog No.	Formulation	Size
FY12366	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

[Bulk quote request](#)

<b>Availability</b>	1-2 days
<b>Species Reactivity</b>	Human, Mouse
<b>Format</b>	Lyophilized
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal (rabbit origin)
<b>Isotype</b>	Rabbit IgG
<b>Purity</b>	Immunogen affinity purified
<b>Buffer</b>	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
<b>UniProt</b>	Q9BYU1
<b>Applications</b>	Western Blot : 0.25-0.5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml ELISA : 0.1-0.5ug/ml
<b>Limitations</b>	This PBX4 antibody is available for research use only.



Immunofluorescent staining of PBX4 using anti-PBX4 antibody (red) and anti-Beta Tubulin antibody (green). PBX4 was detected in immunocytochemical section of cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-PBX4 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG and FITC Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of PBX4 using anti-PBX4 antibody. Lane 1: human 293T whole cell lysates, Lane 2: human SK-OV-3 whole cell lysates, Lane 3: human whole cell lysates, Lane 4: human COLO320 whole cell lysates, Lane 5: human Raw264.7 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-PBX4 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. The expected molecular weight of PBX4 is ~40 kDa.

## Description

The PBX4 antibody targets Pre-B-cell leukemia transcription factor 4, a nuclear homeobox protein encoded by the PBX4 gene. PBX4 is a member of the TALE (three amino acid loop extension) class of homeodomain transcription factors that regulate gene expression during development, differentiation, and organogenesis. By forming heterodimeric or trimeric complexes with HOX and MEIS family proteins, Pre-B-cell leukemia transcription factor 4 modulates the transcription of genes involved in skeletal formation, hematopoiesis, and reproductive system development. The PBX4 antibody provides a powerful reagent for exploring transcriptional control mechanisms mediated by this developmental regulator.

Pre-B-cell leukemia transcription factor 4 contains a conserved homeodomain that binds DNA at specific sequence motifs and an N-terminal domain that mediates protein-protein interactions. It functions both as a transcriptional activator and repressor depending on its cofactors and target promoters. The PBX4 antibody enables visualization of nuclear expression and quantification of PBX4 across tissue types, supporting studies into gene regulatory networks controlling pattern formation and organ differentiation.

PBX family proteins act as cofactors for HOX transcription factors, enhancing DNA-binding specificity and transcriptional activation of developmental genes. PBX4 is expressed in gonadal, skeletal, and neural tissues, where it helps coordinate morphogenesis and cell lineage specification. The PBX4 antibody supports detailed characterization of these expression domains in embryonic and adult tissues. Functional studies suggest PBX4 may also influence germ cell maturation and fertility by regulating genes involved in testis differentiation.

In cancer biology, aberrant PBX expression contributes to oncogenesis by altering transcriptional programs that control proliferation and differentiation. Elevated PBX4 levels have been linked to tumor growth, epithelial-mesenchymal transition, and metastasis in several cancers. The PBX4 antibody enables detection of these expression changes and supports functional studies investigating its role in oncogenic transcriptional regulation. Western blotting and immunohistochemical analysis using this antibody reveal nuclear localization typical of transcription factors.

The PBX4 antibody performs effectively in immunofluorescence, immunohistochemistry, and chromatin immunoprecipitation, providing versatility across molecular and developmental biology applications. NSJ Bioreagents offers this reagent with validated specificity for reproducible detection of Pre-B-cell leukemia transcription factor 4. By supporting investigations into gene regulation, development, and disease, the PBX4 antibody contributes to ongoing research that clarifies how TALE homeodomain proteins orchestrate transcriptional control during differentiation and pathogenesis.

## Application Notes

Optimal dilution of the PBX4 antibody should be determined by the researcher.

## Immunogen

E.coli-derived human PBX4 recombinant protein (Position: A3-Q355) was used as the immunogen for the PBX4 antibody.

## Storage

After reconstitution, the PBX4 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.