BOSTER
antibody and ELISA experts

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# Anti-YB1/YBX1 Antibody Picoband®

**Catalog Number:** PB9465

## About YBX1

YBX1 (Y box binding protein 1), commonly referred to as "YB-1" by researchers, is a human protein. YB1 binding has an absolute requirement for the CCAAT box and relative specificity for the Y box. It has a molecular mass of 35,414 and contains 18% basic residues and putative nuclear localization signals. The YBX1 gene is mapped on 1p34.2. Ybx1 was highly expressed in mouse erythroid myeloid lymphoid clone-1 (EML), a hematopoietic precursor cell line, but that it was downregulated in myeloid progenitors and in Gmcsf-treated EML cells during myeloid differentiation. Ybx1 was expressed at high levels in myeloid leukemic cells at different developmental stages. Knockdown of YBX1 in a human leukemic cell line inhibited proliferation ability, induced apoptosis, and induced megakaryocytic differentiation in response to arsenic trioxide treatment. YBX1 is downregulated during myeloid differentiation and aberrant YBX1 expression in leukemic cells may contribute to leukemia development by blocking differentiation.

## Overview

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| Product Name | Anti-YB1/YBX1 Antibody Picoband® |
| Reactive Species | Human, Mouse, Rat |
| Description | Boster Bio Anti-YB1/YBX1 Antibody Picoband® catalog # PB9465. Tested in Flow Cytometry, IF, IHC, IHC-F, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance. |
| Application | Flow Cytometry, IF, IHC, IHC-F, ICC, WB |
| Clonality | Polyclonal |
| Formulation | Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4. |
| Storage Instructions | Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles. |
| Host | Rabbit |
| Uniprot ID | P67809 |

## Technical Details

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| Immunogen | A synthetic peptide corresponding to a sequence at the C-terminus of human YB1, identical to the related mouse and rat sequences. |
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC. |
| Cross Reactivity | No cross-reactivity with other proteins |

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| Isotype | Rabbit IgG |
| Form | Lyophilized |
| Concentration | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml. |
| Purification | Immunogen affinity purified. |
| Suggested Dilutions | Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.<br>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.<br>Some PubMed article(s) citing the expression level of this target are as follows:<br>Boster Bio's internal QC testing used:<br>Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat<br>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat<br>Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Human, -<br>Immunocytochemistry/Immunofluorescence, 5ug/ml, Human<br>Flow Cytometry (Fixed), 1-3ug/1x$10^6$ cells, Human |

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# Anti-YB1/YBX1 Antibody Picoband® (PB9465) Images

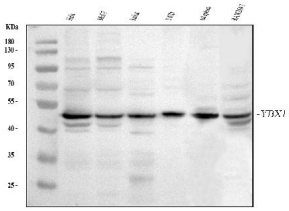

Figure 1. Western blot analysis of YB1 using anti-YB1 antibody (PB9465).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human MCF-7 whole cell lysates,
Lane 3: human Jurkat whole cell lysates,
Lane 4: human T47D whole cell lysates,
Lane 5: rat spleen tissue lysates,
Lane 6: mouse RAW264.7 whole cell lysates.
red 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-YB1 antigen affinity purified polyclonal antibody (Catalog # PB9465) at 0.5 ug/mL overnight at 4°C, 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 is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for YB1 at approximately 50 kDa. The expected band size for YB1 is at 36 kDa.

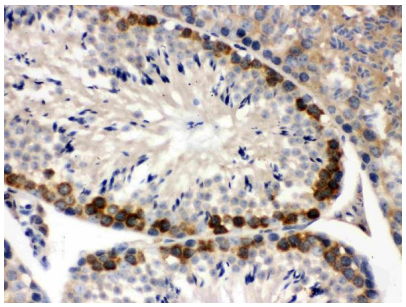

Figure 2. IHC analysis of YB using anti-YB antibody (PB9465). YB was detected in paraffin-embedded section of mouse testis tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-YB Antibody (PB9465) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

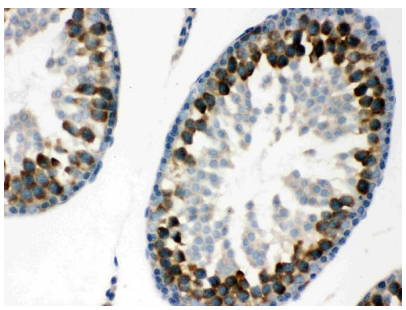

Figure 3. IHC analysis of YB using anti-YB antibody (PB9465). YB was detected in paraffin-embedded section of rat testis tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-YB Antibody (PB9465) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

Figure 4. IHC analysis of YB using anti-YB antibody (PB9465). YB was detected in paraffin-embedded section of human

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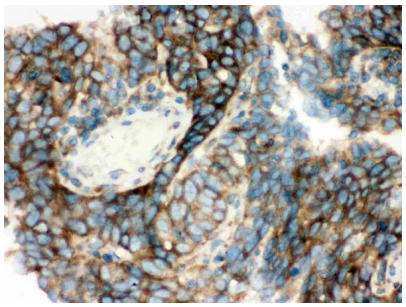

lung cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-YB Antibody (PB9465) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

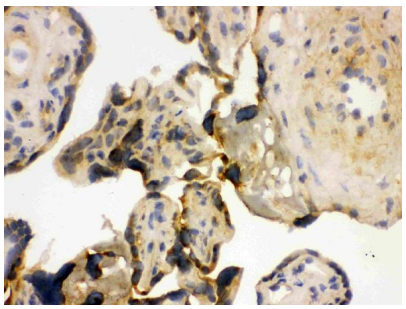

Figure 5. IHC analysis of YB using anti-YB antibody (PB9465). YB was detected in frozen section of human placenta tissue. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-YB Antibody (PB9465) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

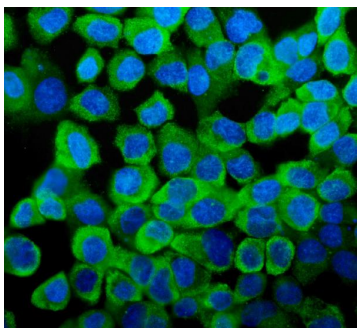

Figure 6. IF analysis of YB1 using anti-YB1 antibody (PB9465).
YB1 was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-YB1 Antibody (PB9465) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

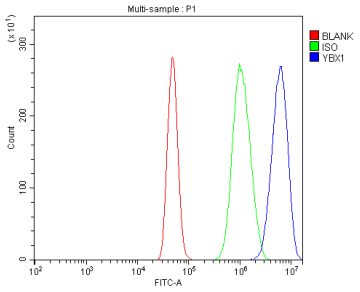


Figure 7. Flow Cytometry analysis of A431 cells using anti-YB1 antibody (PB9465).
Overlay histogram showing A431 cells stained with PB9465 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-YB1 Antibody (PB9465, 1ug/1x$10^6$ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x$10^6$ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x$10^6$) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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