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antibody and ELISA experts

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Anti-YB1/YBX1 Antibody

Catalog Number: PA1758

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

Product Name	Anti-YB1/YBX1 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-YB1/YBX1 Antibody catalog # PA1758. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IHC, 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

Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human YB1, identical to the related rat and mouse sequences.
Predicted Reactive Species	Hamster
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).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG

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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. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human, Mouse, Rat Flow Cytometry, 1-3 ug/1x10^6 cells, Human

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Anti-YB1/YBX1 Antibody (PA1758) Images

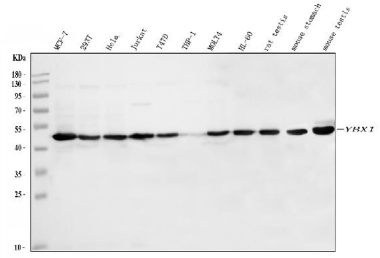

Figure 1. Western blot analysis of YBX1 using anti-YBX1 antibody (PA1758).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human MCF-7 whole cell lysates,
Lane 2: human 293T whole cell lysates,
Lane 3: human Hela whole cell lysates,
Lane 4: human Jurkat whole cell lysates,
Lane 5: human T47D whole cell lysates,
Lane 6: human THP-1 whole cell lysates,
Lane 7: human MOLT4 whole cell lysates,
Lane 8: human HL-60 whole cell lysates,
Lane 9: rat testis tissue lysates,
Lane 10: mouse stomach tissue lysates,
Lane 11: mouse testis tissue 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-YBX1 antigen affinity purified polyclonal antibody (Catalog # PA1758) 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 YBX1 at approximately 50 kDa. The expected band size for YBX1 is at 36 kDa.

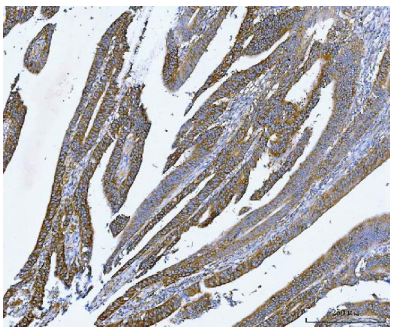

Figure 2. IHC analysis of YBX1 using anti-YBX1 antibody (PA1758).
YBX1 was detected in a paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-YBX1 Antibody (PA1758) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

Figure 3. IHC analysis of YBX1 using anti-YBX1 antibody (PA1758).
YBX1 was detected in a paraffin-embedded section of human ovarian cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-YBX1 Antibody (PA1758) overnight at 4°C.

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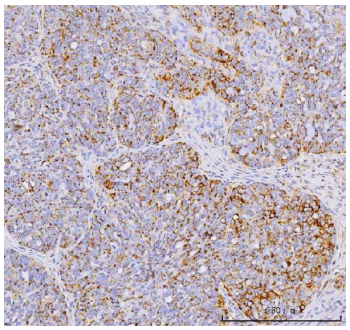

Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

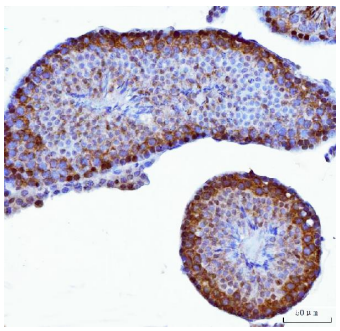

Figure 4. IHC analysis of YBX1 using anti-YBX1 antibody (PA1758).
YBX1 was detected in a paraffin-embedded section of mouse testis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-YBX1 Antibody (PA1758) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

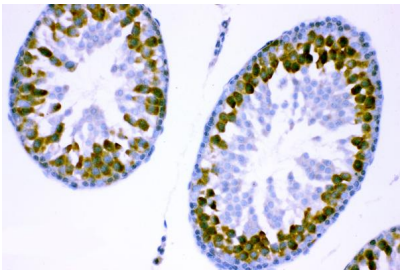

Figure 5. IHC analysis of YBX1 using anti-YBX1 antibody (PA1758).
YBX1 was detected in a paraffin-embedded section of rat testis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-YBX1 Antibody (PA1758) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

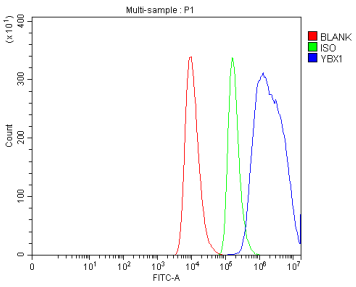

Figure 6. Flow Cytometry analysis of HEL cells using anti-YBX1 antibody (PA1758).
Overlay histogram showing HEL cells stained with PA1758 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-YBX1 Antibody (PA1758, 1 ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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