

**Anti-YB1 Picoband Antibody**  
Catalog # ABO12154**Specification****Anti-YB1 Picoband Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P67809</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Nuclease-sensitive element-binding protein 1(YBX1) detection. Tested with WB, IHC-P, IHC-F in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-YB1 Picoband Antibody - Additional Information**

Gene ID 4904

**Other Names**

Nuclease-sensitive element-binding protein 1, CCAAT-binding transcription factor I subunit A, CBF-A, DNA-binding protein B, DBPB, Enhancer factor I subunit A, EFI-A, Y-box transcription factor, Y-box-binding protein 1, YB-1, YBX1, NSEP1, YB1

**Calculated MW**

induced apoptosis KDa

**Application Details**

Immunohistochemistry(Frozen Section), 0.5-1 µg/ml, Human,  
-<br>Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By  
Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**

sc 33783|sc 166594|sc 101273|sc 27681|sc 33784|sc 271624|sc 27680|sc 166224

**Tissue Specificity**

YBX1

**Source**

Nuclease-sensitive element-binding protein 1;CCAAT-binding transcription factor I subunit A;CBF-A;DNA-binding protein B;DBPB;Enhancer factor I subunit A;EFI-A;Y-box transcription factor;Y-box-binding protein 1;YB-1;YBX1;NSEP1, YB1;

**Protein Name**

Nuclease-sensitive element-binding protein 1

## Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>N.

## Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human YB1 (293-320aa ENPKPQDGKETKAADPPAENSSAPEAEQ), identical to the related mouse and rat sequences.

## Purification

Immunogen affinity purified.

## Cross Reactivity

No cross reactivity with other proteins

## Storage

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

## Sequence Similarities

Mediates pre-mRNA alternative splicing regulation. Binds to splice sites in pre-mRNA and regulates splice site selection. Binds and stabilizes cytoplasmic mRNA. Contributes to the regulation of translation by modulating the interaction between the mRNA and eukaryotic initiation factors (By similarity). Regulates the transcription of numerous genes. Its transcriptional activity on the multidrug resistance gene MDR1 is enhanced in presence of the APEX1 acetylated form at 'Lys-6' and 'Lys-7'. Binds to promoters that contain a Y-box (5'-CTGATTGCCAA-3'), such as MDR1 and HLA class II genes. Promotes separation of DNA strands that contain mismatches or are modified by cisplatin. Has endonucleolytic activity and can introduce nicks or breaks into double-stranded DNA (in vitro). May play a role in DNA repair. Component of the CRD-mediated complex that promotes MYC mRNA stability. Binds preferentially to the 5'-[CU]CUGCG-3' motif in vitro. .

## Anti-YB1 Picoband Antibody - Protein Information

Name YBX1 ([HGNC:8014](#))

### Function

DNA- and RNA-binding protein involved in various processes, such as translational repression, RNA stabilization, mRNA splicing, DNA repair and transcription regulation (PubMed:[10817758](http://www.uniprot.org/citations/10817758), PubMed:[11698476](http://www.uniprot.org/citations/11698476), PubMed:[14718551](http://www.uniprot.org/citations/14718551), PubMed:[18809583](http://www.uniprot.org/citations/18809583), PubMed:[31358969](http://www.uniprot.org/citations/31358969), PubMed:[8188694](http://www.uniprot.org/citations/8188694)). Predominantly acts as a RNA-binding protein: binds preferentially to the 5'-[CU]CUGCG-3' RNA motif and specifically recognizes mRNA transcripts modified by C5-methylcytosine (m5C) (PubMed:[19561594](http://www.uniprot.org/citations/19561594), PubMed:[31358969](http://www.uniprot.org/citations/31358969)). Promotes mRNA stabilization: acts by binding to m5C-containing mRNAs and recruiting the mRNA stability maintainer ELAVL1, thereby preventing mRNA decay (PubMed:[10817758](http://www.uniprot.org/citations/10817758), PubMed:[11698476](http://www.uniprot.org/citations/11698476), PubMed:[31358969](http://www.uniprot.org/citations/31358969)). Component of the CRD-mediated complex that promotes MYC mRNA stability (PubMed:[19029303](http://www.uniprot.org/citations/19029303)). Contributes to the regulation of translation by modulating the interaction between the mRNA and eukaryotic

initiation factors (By similarity). Plays a key role in RNA composition of extracellular exosomes by defining the sorting of small non-coding RNAs, such as tRNAs, Y RNAs, Vault RNAs and miRNAs (PubMed:<a href="http://www.uniprot.org/citations/27559612" target="\_blank">27559612</a>, PubMed:<a href="http://www.uniprot.org/citations/29073095" target="\_blank">29073095</a>). Probably sorts RNAs in exosomes by recognizing and binding C5-methylcytosine (m5C)-containing RNAs (PubMed:<a href="http://www.uniprot.org/citations/28341602" target="\_blank">28341602</a>, PubMed:<a href="http://www.uniprot.org/citations/29073095" target="\_blank">29073095</a>). Acts as a key effector of epidermal progenitors by preventing epidermal progenitor senescence: acts by regulating the translation of a senescence-associated subset of cytokine mRNAs, possibly by binding to m5C-containing mRNAs (PubMed:<a href="http://www.uniprot.org/citations/29712925" target="\_blank">29712925</a>). Also involved in pre-mRNA alternative splicing regulation: binds to splice sites in pre-mRNA and regulates splice site selection (PubMed:<a href="http://www.uniprot.org/citations/12604611" target="\_blank">12604611</a>). Binds to TSC22D1 transcripts, thereby inhibiting their translation and negatively regulating TGF-beta- mediated transcription of COL1A2 (By similarity). Also able to bind DNA: regulates transcription of the multidrug resistance gene MDR1 is enhanced in presence of the APEX1 acetylated form at 'Lys-6' and 'Lys- 7' (PubMed:<a href="http://www.uniprot.org/citations/18809583" target="\_blank">18809583</a>). Binds to promoters that contain a Y-box (5'- CTGATTGGCCAA-3'), such as MDR1 and HLA class II genes (PubMed:<a href="http://www.uniprot.org/citations/18809583" target="\_blank">18809583</a>, PubMed:<a href="http://www.uniprot.org/citations/8188694" target="\_blank">8188694</a>). Promotes separation of DNA strands that contain mismatches or are modified by cisplatin (PubMed:<a href="http://www.uniprot.org/citations/14718551" target="\_blank">14718551</a>). Has endonucleolytic activity and can introduce nicks or breaks into double- stranded DNA, suggesting a role in DNA repair (PubMed:<a href="http://www.uniprot.org/citations/14718551" target="\_blank">14718551</a>). The secreted form acts as an extracellular mitogen and stimulates cell migration and proliferation (PubMed:<a href="http://www.uniprot.org/citations/19483673" target="\_blank">19483673</a>).

#### Cellular Location

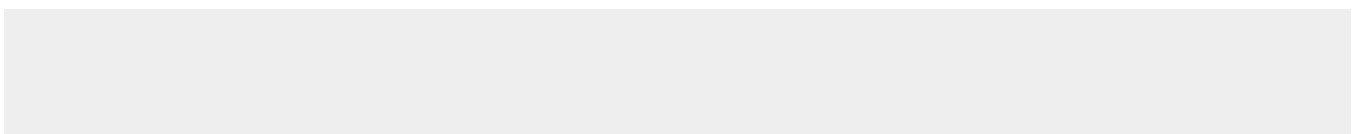
Cytoplasm. Nucleus. Cytoplasmic granule. Secreted. Secreted, extracellular exosome. Cytoplasm, P-body {ECO:0000250|UniProtKB:P62960}. Note=Predominantly cytoplasmic in proliferating cells (PubMed:12604611). Cytotoxic stress and DNA damage enhance translocation to the nucleus (PubMed:14718551) Localized in cytoplasmic mRNP granules containing untranslated mRNAs (PubMed:25229427). Shuttles between nucleus and cytoplasm (PubMed:25229427). Localized with DDX1, MBNL1 and TIAL1 in stress granules upon stress (PubMed:18335541). Secreted by mesangial and monocytic cells after inflammatory challenges (PubMed:19483673)

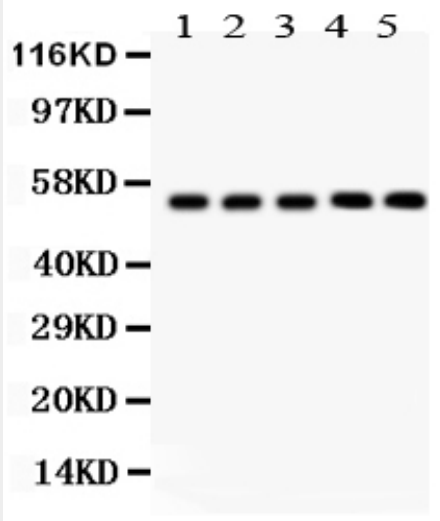
#### Anti-YB1 Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

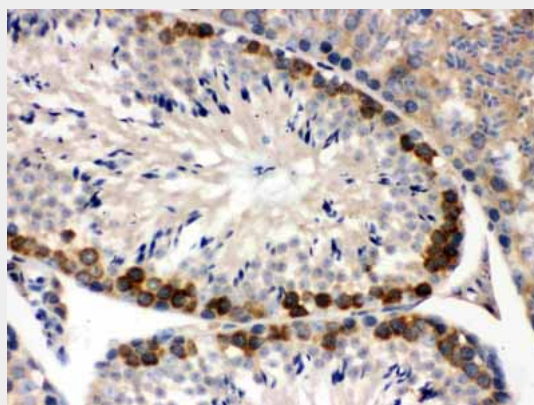
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Anti-YB1 Picoband Antibody - Images

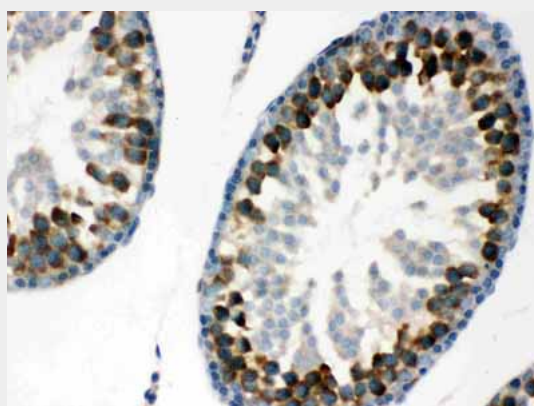




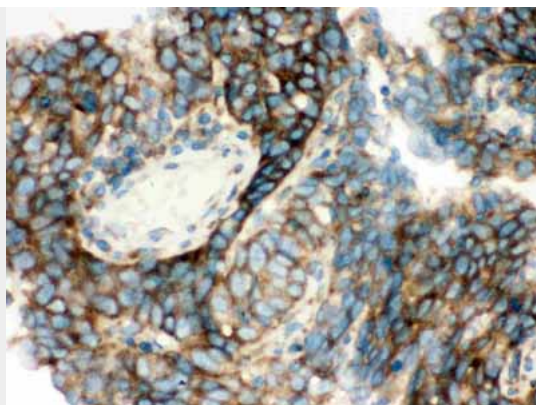
Anti- YB1 Picoband antibody, ABO12154, Western blotting All lanes: Anti YB1 (ABO12154) at 0.5ug/ml Lane 1: Rat Liver Tissue Lysate at 50ug Lane 2: Mouse Liver Tissue Lysate at 50ug Lane 3: SMMC Whole Cell Lysate at 40ug Lane 4: RH35 Whole Cell Lysate at 40ug Lane 5: HEPG2 Whole Cell Lysate at 40ug Predicted bind size: 36KD Observed bind size: 50KD



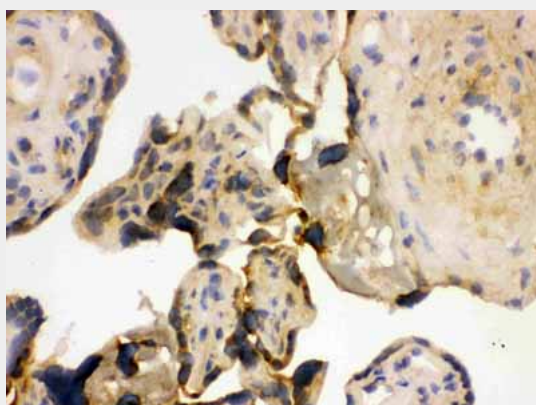
Anti- YB1 Picoband antibody, ABO12154, IHC(P) IHC(P): Mouse Testis Tissue



Anti- YB1 Picoband antibody, ABO12154, IHC(P) IHC(P): Rat Testis Tissue



Anti- YB1 Picoband antibody, ABO12154,IHC(P)IHC(P): Human Lung Cancer Tissue



Anti- YB1 Picoband antibody, ABO12154,IHC(F)IHC(F): Human Placenta Tissue

#### **Anti-YB1 Picoband Antibody - Background**

YBX1(Y box binding protein 1), commonly referred to as YB-1" by researchers