

**Anti-YBX1 / YB1 Antibody (clone 4F12)**  
**Mouse Anti Human Monoclonal Antibody**  
**Catalog # ALS17987****Specification**

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**Anti-YBX1 / YB1 Antibody (clone 4F12) - Product Information**

Application	<b>WB, IHC-P, IF, E</b>
Primary Accession	<a href="#">P67809</a>
Predicted	<b>Human</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG2a,k</b>
Calculated MW	<b>35924</b>

**Anti-YBX1 / YB1 Antibody (clone 4F12) - Additional Information****Gene ID** 4904**Alias Symbol** **YBX1****Other Names**

YBX1, CBF-A, DBPB, CSDB, DNA-binding protein B, MDR-NF1, NSEP-1, NSEP1, Y box binding protein 1, Y-box transcription factor, Y-box-binding protein 1, YB-1, BP-8, CSDA2, EFI-A, Enhancer factor I subunit A, YB1

**Target/Specificity**

Human YBX1 / YB1

**Reconstitution & Storage**

Protein A purified

**Precautions**

Anti-YBX1 / YB1 Antibody (clone 4F12) is for research use only and not for use in diagnostic or therapeutic procedures.

**Anti-YBX1 / YB1 Antibody (clone 4F12) - 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: <a href="http://www.uniprot.org/citations/10817758" target="\_blank">10817758</a>, PubMed: <a href="http://www.uniprot.org/citations/11698476" target="\_blank">11698476</a>, PubMed: <a href="http://www.uniprot.org/citations/14718551" target="\_blank">14718551</a>, PubMed: <a href="http://www.uniprot.org/citations/18809583" target="\_blank">18809583</a>, PubMed: <a href="http://www.uniprot.org/citations/31358969" target="\_blank">31358969</a>, PubMed: <a href="http://www.uniprot.org/citations/8188694" target="\_blank">8188694</a>). Predominantly acts as a RNA-binding protein: binds preferentially to the 5<sup>1</sup>-[CU]CUGCG-3' RNA motif and

specifically recognizes mRNA transcripts modified by C5-methylcytosine (m5C) (PubMed:<a href="http://www.uniprot.org/citations/19561594" target="\_blank">19561594</a>, PubMed:<a href="http://www.uniprot.org/citations/31358969" target="\_blank">31358969</a>). Promotes mRNA stabilization: acts by binding to m5C- containing mRNAs and recruiting the mRNA stability maintainer ELAVL1, thereby preventing mRNA decay (PubMed:<a href="http://www.uniprot.org/citations/10817758" target="\_blank">10817758</a>, PubMed:<a href="http://www.uniprot.org/citations/11698476" target="\_blank">11698476</a>, PubMed:<a href="http://www.uniprot.org/citations/31358969" target="\_blank">31358969</a>). Component of the CRD-mediated complex that promotes MYC mRNA stability (PubMed:<a href="http://www.uniprot.org/citations/19029303" target="\_blank">19029303</a>). 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'- CTGATTGCCAA-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-YBX1 / YB1 Antibody (clone 4F12) - 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-YBX1 / YB1 Antibody (clone 4F12) - Images**