

**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	WB, IHC-P, IF, E
Primary Accession	<a href="#">P67809</a>
Predicted	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a,k
Calculated MW	35924
Dilution	WB~~1:1000 IHC-P~~N/A IF~~1:50~200 E~~N/A

**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

[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: [27559612](http://www.uniprot.org/citations/27559612), PubMed: [29073095](http://www.uniprot.org/citations/29073095)). Probably sorts RNAs in exosomes by recognizing and binding C5-methylcytosine (m5C)-containing RNAs (PubMed: [28341602](http://www.uniprot.org/citations/28341602), PubMed: [29073095](http://www.uniprot.org/citations/29073095)). 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: [29712925](http://www.uniprot.org/citations/29712925)). Also involved in pre-mRNA alternative splicing regulation: binds to splice sites in pre-mRNA and regulates splice site selection (PubMed: [12604611](http://www.uniprot.org/citations/12604611)). 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: [18809583](http://www.uniprot.org/citations/18809583)). Binds to promoters that contain a Y-box (5'-CTGATTGGCCAA-3'), such as MDR1 and HLA class II genes (PubMed: [18809583](http://www.uniprot.org/citations/18809583), PubMed: [8188694](http://www.uniprot.org/citations/8188694)). Promotes separation of DNA strands that contain mismatches or are modified by cisplatin (PubMed: [14718551](http://www.uniprot.org/citations/14718551)). Has endonucleolytic activity and can introduce nicks or breaks into double-stranded DNA, suggesting a role in DNA repair (PubMed: [14718551](http://www.uniprot.org/citations/14718551)). The secreted form acts as an extracellular mitogen and stimulates cell migration and proliferation (PubMed: [19483673](http://www.uniprot.org/citations/19483673)).

### 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**