

YB1 (YBX1) Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP6295a**Specification**

YB1 (YBX1) Antibody (N-term) Blocking peptide - Product InformationPrimary Accession [P67809](#)**YB1 (YBX1) Antibody (N-term) Blocking peptide - 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

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP6295a](/products/AP6295a) was selected from the N-term region of human YBX1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

YB1 (YBX1) Antibody (N-term) Blocking peptide - Protein InformationName 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: [8188694](http://www.uniprot.org/citations/8188694), 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)). 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, PubMed:31358969). Promotes mRNA stabilization: acts by binding to m5C- containing mRNAs and recruiting the mRNA stability maintainer ELAVL1, thereby preventing mRNA decay (PubMed:10817758, PubMed:11698476, PubMed:31358969). Component of the CRD-mediated complex that promotes MYC mRNA stability (PubMed: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, PubMed:29073095). Probably sorts RNAs in exosomes by recognizing and binding C5-methylcytosine (m5C)-containing RNAs (PubMed:28341602, PubMed: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). Also involved in pre-mRNA alternative splicing regulation: binds to splice sites in pre-mRNA and regulates splice site selection (PubMed: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). Binds to promoters that contain a Y-box (5'- CTGATTGGCCAA-3'), such as MDR1 and HLA class II genes (PubMed:8188694, PubMed:18809583). Promotes separation of DNA strands that contain mismatches or are modified by cisplatin (PubMed:14718551). Has endonucleolytic activity and can introduce nicks or breaks into double- stranded DNA, suggesting a role in DNA repair (PubMed:14718551). The secreted form acts as an extracellular mitogen and stimulates cell migration and proliferation (PubMed: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)

YB1 (YBX1) Antibody (N-term) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

YB1 (YBX1) Antibody (N-term) Blocking peptide - Images

YB1 (YBX1) Antibody (N-term) Blocking peptide - Background

YBX1 binds to splice sites in pre-mRNA and regulates splice site selection. This protein binds and stabilizes cytoplasmic mRNA and contributes to the regulation of translation by modulating the interaction between the mRNA and eukaryotic initiation factors. It binds to promoters that contain a Y-box (5'-CTGATTGGCCAA-3'), such as HLA class II genes. It regulates the transcription of numerous genes and promotes separation of DNA strands that contain mismatches or are modified by cisplatin. It has endonucleolytic activity and can introduce nicks or breaks into double-stranded DNA (in vitro), and it may play a role in DNA repair.

YB1 (YBX1) Antibody (N-term) Blocking peptide - References

Fujii,T., Cancer Res. 68 (5), 1504-1512 (2008)Fraser,D.J., Kidney Int. 73 (6), 724-732 (2008)Shiota,M., Cancer Res. 68 (1), 98-105 (2008)