

Anti-YBX1 Antibody

Rabbit polyclonal antibody to YBX1

Catalog # AP61463

Product Information

Application	WB
Primary Accession	P67809
Other Accession	P62960
Reactivity	Human, Mouse, Rat, Chicken, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	35924

Additional Information

Gene ID	4904
Other Names	NSEP1; YB1; 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
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human YBX1. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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 , PubMed: 11698476 , PubMed: 14718551 , PubMed: 18809583 , PubMed: 31358969 , PubMed: 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 , 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:[18809583](#), PubMed:[8188694](#)). 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](#)).

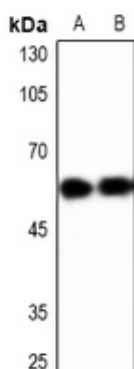
Cellular Location

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)

Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human YBX1. The exact sequence is proprietary.

Images



Western blot analysis of YBX1 expression in mouse brain (A), rat brain (B) whole cell lysates.