

YB1 (15K16) Rabbit Monoclonal Antibody

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Catalog # AP93670

Product Information

Application	WB, IHC, IF, FC, ICC, IP
Primary Accession	P67809
Reactivity	Human, Mouse
Clonality	Monoclonal
Calculated MW	35924

Additional Information

Gene ID	4904
Other Names	Y-box-binding protein 1, YB-1, CCAAT-binding transcription factor I subunit A, CBF-A, DNA-binding protein B, Nuclease-sensitive element-binding protein 1, Y-box transcription factor, YBX1 (HGNC:8014)
Dilution	WB~~1:1000 IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50 ICC~~N/A IP~~N/A
Storage Conditions	-20°C

Protein Information

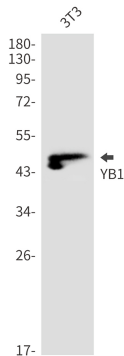
Name	YBX1 (HGNC:8014)
Function	DNA- and RNA-binding protein involved in various processes, such as translational repression, RNA stabilization, mRNA splicing, DNA repair and transcription regulation (PubMed: 10817758 , PubMed: 11698476 , PubMed: 14718551 , PubMed: 18809583 , PubMed: 31358969 , PubMed: 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](#))

Images



Western blot detection of YB1 in HeLa,C2C12 cell lysates using YB1 antibody(1:1000 diluted).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.