YB1 (YBX1) Antibody (N-Term) Blocking Peptide

PRODUCT OVERVIEW

Product Name	YB1 (YBX1), Blocking Peptide
Full Product Name	YB1 (YBX1) Antibody (N-term) Blocking peptide
Product Gene Name	YBX1 blocking peptide
Product Synonym Gene Name	NSEP1; YB1
Product Synonym 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
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 1 mg/ml.
Specificity	The synthetic peptide sequence used to generate the antibody 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.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	YB1 (YBX1) peptide (MBS9226032) is used for blocking the activity of YB1 (YBX1) antibody (MBS9208990)
Molecular Weight	35,924 Da
OMIM	154030
Cellular Location	Cytoplasm. Nucleus. Cytoplasmic granule. Secreted. Note: Localized in cytoplasmic mRNP granules containing untranslated mRNAs. Shuttles between nucleus and cytoplasm. Predominantly cytoplasmic in proliferating cells. Cytotoxic stress and DNA damage enhance translocation to the nucleus. Localized with DDX1, MBNL1 and TIAL1 in stress granules upon stress. Secreted by mesangial and monocytic cells after inflammatory challenges. Translocates from the cytoplasm to the nucleus after and colocalizes with APEX1 in nuclear speckles after genotoxic stress
Related Product Information for YBX1 blocking peptide	Mediates pre-mRNA alternative splicing regulation. Binds to splice sites in pre-mRNA and regulates splice site selection. Binds and stabilizes cytoplasmic mRNA. Contributes to the regulation of translation by modulating the interaction between the mRNA and eukaryotic initiation factors (By similarity). Regulates the transcription of numerous genes. Its transcriptional activity on the multidrug resistance gene MDR1 is enhanced in presence of the APEX1 acetylated form at 'Lys-6' and 'Lys-7'. Binds to promoters that contain a Y-box (5'-CTGATTGGCCAA-3'), such as MDR1 and HLA class II genes. Promotes separation of DNA strands that contain mismatches or are modified by cisplatin. Has endonucleolytic activity and can introduce nicks or breaks into double-stranded DNA (in vitro). May play a role in DNA repair. Component of the CRD-mediated complex that promotes MYC mRNA stability. Binds preferentially to the 5'-[CU]CUGCG-3' motif in vitro.
Other Notes	Small volumes of YBX1 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for YBX1 purchase	MBS9226032 is a blocking peptide targeting YBX1. Also known as YB1 (YBX1) Antibody (N-term) Blocking peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for YBX1. It may not necessarily be applicable to this product.

NCBI GI #	54040031
NCBI GeneID	4904

NCBI Accession #	P67809.3
UniProt Primary Accession #	P67809
UniProt Secondary Accession #	P16990; P16991; Q14972; Q15325; Q5FVF0
UniProt Related Accession #	P67809
NCBI Official Full Name	Nuclease-sensitive element-binding protein 1
NCBI Official Synonym Full Names	Y-box binding protein 1
NCBI Official Symbol	YBX1
NCBI Official Synonym Symbols	YB1; BP-8; CSDB; DBPB; YB-1; CBF-A; CSDA2; EFI-A; NSEP1; NSEP-1; MDR-NF1
UniProt Protein Name	Nuclease-sensitive element-binding protein 1
UniProt Synonym Protein Names	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
Protein Family	Nuclease-sensitive element-binding protein
UniProt Gene Name	YBX1
UniProt Synonym Gene Names	NSEP1; YB1; CBF-A; DBPB; EFI-A; YB-1
UniProt Entry Name	YBOX1_HUMAN
NCBI Protein Information	nuclease-sensitive element-binding protein 1
NCBI Summary for YBX1	This gene encodes a highly conserved cold shock domain protein that has broad nucleic acid binding properties. The encoded protein functions as both a DNA and RNA binding protein and has been implicated in numerous cellular processes including regulation of transcription and translation, pre-mRNA splicing, DNA reparation and mRNA packaging. This protein is also a component of messenger ribonucleoprotein (mRNP) complexes and may have a role in microRNA processing. This protein can be secreted through non-classical pathways and functions as an extracellular mitogen. Aberrant expression of the gene is associated with cancer proliferation in numerous tissues. This gene may be a prognostic marker for poor outcome and drug resistance in certain cancers. Alternate splicing results in multiple transcript variants. Pseudogenes of this gene are found on multiple chromosomes. [provided by RefSeq, Sep 2015]
UniProt Comments for YBX1	YB-1: a nuclear protein that binds to splice sites in pre-mRNA and regulates splice site selection. Binds and stabilizes cytoplasmic mRNA. Contributes to the regulation of translation by modulating the interaction between the mRNA and eukaryotic initiation factors CCAAT-containing Y-box of HLA class II genes. Component of cytoplasmic messenger ribonucleoprotein particles (mRNPs). Interacts with AKT1, SFRS9, THOC4, MSH2, XRCC5, WRN and NCL. Can bind to DNA as a homomeric form, (EFI-A)n or as a heteromeric form in association with EFI-B. Homodimer in the presence of ATP. Involved in cisplatin resistance. Seems to be a negative regulatory factor. May play a role in both transcriptional and translational regulation of spermatogenesis. Found at very low levels at day 10 and levels increase at day 15 and persist throughout adulthood. Protein type: RNA-binding; Transcription factor; RNA processing; RNA splicing Chromosomal Location of Human Ortholog: 1p34 Cellular Component: cytoplasm; intracellular membrane-bound organelle; nuclear membrane; nucleoplasm; nucleus; ribonucleoprotein complex; stress granule; U12-dependent spliceosome Molecular Function: DNA binding; double-stranded DNA binding; GTPase binding; protein binding; RNA binding; single-stranded DNA binding; transcription factor activity Biological Process: nuclear mRNA splicing, via spliceosome; positive regulation of transcription from RNA polymerase II promoter; regulation of transcription, DNA-dependent; transcription from RNA polymerase II promoter
Research Articles on YBX1	**1.** YB-1 appears to be a promising target to inhibit the development of castration resistance, even at the AR variant-expressing stage. Polymorphism in the YB-1 gene may be a promising predictive biomarker in hormonal therapy.

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