

Recombinant Mouse Ybx1 Protein, Myc/DDK-tagged

Cat. No. Ybx1-7029M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of Mouse Y box protein 1 (Ybx1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
ProteinLength	1-322 aa
Description	DNA- and RNA-binding protein involved in various processes, such as translational repression, RNA stabilization, mRNA splicing, DNA repair and transcription regulation. 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). Promotes mRNA stabilization: acts by binding to m5C-containing mRNAs and recruiting the mRNA stability maintainer ELAVL1, thereby preventing mRNA decay. Component of the CRD-mediated complex that promotes MYC mRNA stability. Contributes to the regulation of translation by modulating the interaction between the mRNA and eukaryotic initiation factors. 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. Probably sorts RNAs in exosomes by recognizing and binding C5-methylcytosine (m5C)-containing RNAs. 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. Also

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involved in pre-mRNA alternative splicing regulation: binds to splice sites in pre-mRNA and regulates splice site selection. 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'. 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, suggesting a role in DNA repair. The secreted form acts as an extracellular mitogen and stimulates cell migration and proliferation.

Molecular Mass	36.2 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Ybx1 Y box protein 1 [<i>Mus musculus</i> (house mouse)]
Official Symbol	Ybx1
Synonyms	YBX1; Y box protein 1; nuclease-sensitive element-binding protein 1; CBF-A; EFI-A; DNA binding protein B; DNA-binding protein B; Y-box binding protein 1; Y-box-binding

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protein 1; Y-box transcription factor; enhancer factor I subunit A; nuclease sensitive element binding protein 1; CCAAT-binding transcription factor I subunit A; EF1A; MSY1; YB-1; dbpB; Nsep1; C79409; mYB-1a; 1700102N10Rik; MGC118070

Gene ID [22608](#)

mRNA Refseq [NM_011732](#)

Protein Refseq [NP_035862](#)

UniProt ID [P62960](#)

SDS-PAGE

