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YBX2 Antibody

Catalog # ASC11185

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9Y2T7
Other Accession	NP_057066, 156415990
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	38518
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	YBX2 antibody can be used for detection of YBX2 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 10 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	51087
Other Names	Y-box-binding protein 2, Contrin, DNA-binding protein C, Dbpc, Germ cell-specific Y-box-binding protein, MSY2 homolog, YBX2, CSDA3, MSY2
Target/Specificity	YBX2;
Reconstitution & Storage	YBX2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	YBX2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	YBX2
Synonyms	CSDA3, MSY2
Function	Major constituent of messenger ribonucleoprotein particles (mRNPs). Involved in the regulation of the stability and/or translation of germ cell mRNAs. Binds to Y-box consensus promoter element. Binds to full-length mRNA with high affinity in a sequence-independent manner. Binds to short RNA sequences containing the consensus site 5'-UCCAUCA- 3' with low affinity and limited sequence specificity. Its binding with maternal mRNAs is necessary for its cytoplasmic retention. May mark specific mRNAs (those

	transcribed from Y-box promoters) in the nucleus for cytoplasmic storage, thereby linking transcription and mRNA storage/translational delay (By similarity).
Cellular Location	Cytoplasm. Nucleus
Tissue Location	Expressed in oocytes and testicular germ cells in the stage of spermatogonia to spermatocyte. Also observed placental trophoblasts, as well as in vascular smooth muscle cells in the pulmonary artery, myocardium, and skeletal muscle. Undetectable in epithelial cells in respiratory, gastrointestinal, and urogenital tracts. Up-regulated in various carcinomas and germ cell tumors (at protein level).

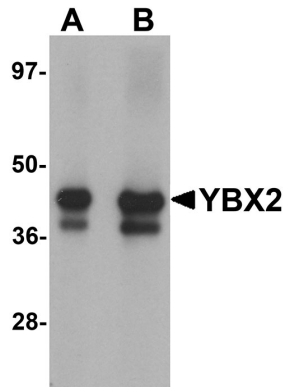
Background

YBX2 Antibody: Germ cell specific Y-box binding protein (YBX2), a germ-cell-specific member of the Y-box family of DNA-/RNA-binding proteins, is a major constituent of messenger ribonucleoprotein particles (mRNPs) and involved in the regulation of the stability and/or translation of germ cell mRNAs. It is proposed to function as a coactivator of transcription in the nucleus and to stabilize and store maternal and paternal mRNAs in the cytoplasm. YBX2 binds to the Y-box consensus promoter element and is expressed in oocytes and testicular germ cells in the stage of spermatogonia to spermatocyte. Recent studies show that deletion of YBX2 leads to the disruption of both spermatogenesis and oogenesis.

References

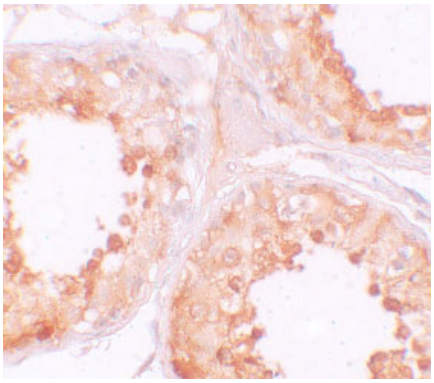
Kohno Y, Matsuki Y, Tanimoto A, et al. Expression of Y-box-binding protein dbpC/contrin, a potentially new cancer/testis antigen. Br. J. Cancer2006; 94:710-6.
Medvedev S, Yang J, Hecht NB, et al. CDC2A (CDK1)-mediated phosphorylation of MSY2 triggers maternal mRNA degradation during mouse oocyte maturation. Dev. Biol.2008; 321:205-15.
Yang J, Medvedev S, Yu J, et al. Absence of the DNA-/RNA-binding protein MSY2 results in male and female infertility. Proc. Natl. Acad. Sci. USA2005; 102:5755-60.
Hammoud S, Emery BR, and Dunn D. Sequence alterations in the YBX2 gene are associated with male factor infertility. Fertil. Steril.2009; 91:1090-5.

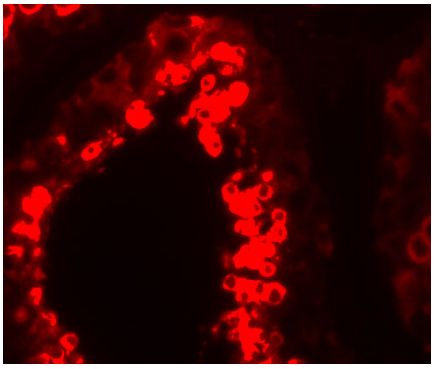
Images



Western blot analysis of YBX2 in human testis tissue lysate with YBX2 antibody at (A) 1 and (B) 2 µg/mL.

Immunohistochemistry of YBX2 in human testis tissue with YBX2 antibody at 10 µg/mL.





Immunofluorescence of YBX2 in human testis tissue with YBX2 antibody at 20 µg/mL.