10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MSY2 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54805

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q9Y2T7
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	38518
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from Human MSY2/YBOX2/DBPC
Epitope Specificity	101-185/364
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm. Nucleus.
SIMILARITY	Contains 1 CSD (cold-shock) domain.
SUBUNIT	Found in a mRNP complex with PABPC1 and CSDA
Post-translational modifications	Phosphorylated during oocyte maturation and dephosphorylated following egg activation. Phosphorylated in vitro by a kinase activity associated with testicular mRNPs. Dephosphorylation leads to a decrease in its affinity to bind RNA in vitro.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	MSY2 and YB-2 (MSY3,4) belong to the Y-box family of multifunctional proteins that regulate both transcription and translation (1–3). Y-box proteins interact with a wide variety of nucleic acid structures to act as transcription factors and mRNA masking proteins (1). The modular structure of Y-box proteins includes a highly conserved N-terminal cold-shock domain (CSD, equivalent to the bacterial cold-shock proteins) and four basic C-terminal domains containing arginine clusters and aromatic residues (4). MSY2 is expressed in testis and ovary where it may repress translation of parental mRNA (5,6). The gene encoding human MSY2 maps to chromosome 17p11.2-13.1 (5). YB-2 (MSY3,4 in mouse) is also known as DNA binding protein A and is highly expressed in the testis, heart and muscle (7,8). MSY2 and YB-2 bind to the consensus sequence 5'-UCCAUCA-3' contained in the Y-box element (9).

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	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).
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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).