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Rabbit Anti-MSY2/AP Conjugated antibody

SL12271R-AP

Product Name	Anti-MSY2/AP
Chinese Name	碱性磷酸酶（AP）标记的 DNABinding proteinC 抗体
Alias	MSY2/YBOX2; YBOX2; Contrin; CSDA 3; CSDA3; DBPC; DNA binding protein C; DNA-binding protein C; FRGY2 homolog; Germ cell specific Y box binding protein; Germ cell-specific Y-box-binding protein; MGC118270; MGC45104; MSY 2; MSY2; MSY2 homolog; OTTMUSP00000006276; RGD1305068; Y box binding protein 2; Y-box-binding protein 2; YBOX2_HUMAN; YBX 2; YBX2.
Research Area	Cell biology Developmental biology Stem cells Binding protein Epigenetics
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	(predicted:Human,Mouse,Rat,Dog,Pig,Cow,Horse,Sheep)
Applications	WB=1000-10000,IHC-P=1:100-500,IHC-F=1:100-500,ELISA=1:500-5000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	38kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from Human MSY2/YBOX2/DBPC (101-185aa)
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Product Detail	**background:** 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).

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.

Subunit:
Found in a mRNP complex with PABPC1 and CSDA

Subcellular Location:
Cytoplasm. Nucleus.

Tissue 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).

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.

Similarity:

Contains 1 CSD (cold-shock) domain.

Database links:

Entrez Gene: 51087 Human

Entrez Gene: 53422 Mouse

Entrez Gene: 303250 Rat

Omim: 611447 Human

SwissProt: Q9Y2T7 Human

SwissProt: Q9Z2C8 Mouse

Unigene: 567494 Human

Unigene: 29286 Mouse

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.