

pan MSY (F-14): sc-21315

BACKGROUND

Contrin (MSY2 in mouse) and YB-2 (MSY3/4 in mouse) belong to the Y-box family of multifunctional proteins that regulate both transcription and translation. Y-box proteins interact with a wide variety of nucleic acid structures to act as transcription factors and mRNA masking proteins. 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. MSY2 (contrin) is expressed in testis and ovary, where it may repress translation of parental mRNA. The gene encoding human contrin maps to chromosome 17p13.1. MSY3/4 (YB-2) is also known as DNA binding protein A and is highly expressed in testis, heart and muscle. Contrin and YB-2 bind to the consensus sequence 5'-UCCAUCA-3' contained in the Y-box element.

REFERENCES

1. Tekur, S., et al. 1999. Contrin, the human homologue of a germ-cell Y-box-binding protein: cloning, expression, and chromosomal localization. *J. Androl.* 20: 135-144.
2. Okamoto, T., et al. 2000. Direct interaction of p53 with the Y-box binding protein, YB-1: a mechanism for regulation of human gene expression. *Oncogene* 54: 6194-6202.
3. Levenson, V.V., et al. 2000. Pleiotropic resistance to DNA-interactive drugs is associated with increased expression of genes involved in DNA replication, repair, and stress response. *Cancer Res.* 18: 5027-5030.
4. Davies, H.G., et al. 2000. A sequence-specific RNA binding complex expressed in murine germ cells contains MSY2 and MSY4. *Dev. Biol.* 221: 87-100.
5. Mastrangelo, M.A., et al. 2000. Developmental expression of Y-box protein 1 mRNA and alternatively spliced Y-box protein 3 mRNAs in spermatogenic cells in mice. *Mol. Hum. Reprod.* 6: 779-788.
6. Diamond, P., et al. 2001. Cold shock domain factors activate the granulocyte-macrophage colony-stimulating factor promoter in stimulated Jurkat T cells. *J. Biol. Chem.* 11: 7943-7951.
7. Chansky, H.A., et al. 2001. Oncogenic TLS/ERG and EWS/Fli-1 fusion proteins inhibit RNA splicing mediated by YB-1 protein. *Cancer Res.* 9: 3586-3590.
8. Yu, J., et al. 2001. Expression of MSY2 in mouse oocytes and preimplantation embryos. *Biol. Reprod.* 65: 1260-1270.
9. Giorgini, F., et al. 2001. MSY2 and MSY4 bind a conserved sequence in the 3' untranslated region of protamine 1 mRNA *in vitro* and *in vivo*. *Mol. Cell. Biol.* 21: 7010-7019.

SOURCE

pan MSY (F-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MSY2 of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21315 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-21315 X, 200 µg/0.1 ml.

APPLICATIONS

pan MSY (F-14) is recommended for detection of YB-1 and MSY2-4 of mouse origin, YB-1 and YB-2 of rat origin and YB-1, YB-2, contrin and DbpA of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

pan MSY (F-14) is also recommended for detection of YB-1, YB-2, contrin and DbpA in additional species, including equine, canine, bovine, porcine and avian.

pan MSY (F-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Positive Controls: Mouse testis extract: sc-2405 or rat testis extract: sc-2400.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.