

RBMS1 (Q-14): sc-107996

BACKGROUND

RBMS1 (RNA binding motif, single stranded interacting protein 1), also known as YC1, MSSP (c-Myc single strand binding protein), SCR2 (suppressor of Cdc2 with RNA binding motif), MSSP-1, MSSP-2 or MSSP-3, is a member of the MSSP family of proteins. The MSSP family is comprised of proteins that bind to single stranded DNA/RNA. Through an interaction with the c-Myc protein, members of this family are involved in a wide variety of cellular functions, including gene transcription, DNA replication, apoptosis and cell cycle progression. RBMS1, a nuclear localized protein, is expressed in lung, placenta and heart with highest expression levels during the G₁ to S transition phase of the cell cycle. RBMS1 contains two RNP domains, namely RNP1-A and RNP1-B, both of which are necessary for DNA binding. RBMS1 specifically binds to a catalytic subunit of DNA polymerase (pol) α and stimulates its activity *in vitro*. Due to alternative splicing events, various isoforms exist for RBMS1.

REFERENCES

1. Kanaoka, Y. and Nojima, H. 1994. SCR: novel human suppressors of Cdc2/Cdc13 mutants of *Schizosaccharomyces pombe* harbour motifs for RNA binding proteins. *Nucleic Acids Res.* 22: 2687-2693.
2. Takai, T., et al. 1994. Molecular cloning of MSSP-2, a c-Myc gene single-strand binding protein: characterization of binding specificity and DNA replication activity. *Nucleic Acids Res.* 22: 5576-5581.
3. Negishi, Y., et al. 1994. Identification and cDNA cloning of single-stranded DNA binding proteins that interact with the region upstream of the human c-Myc gene. *Oncogene* 9: 1133-1143.
4. Haigermoser, C., et al. 1996. Cloning and characterization of the genomic DNA of the human MSSP genes. *Nucleic Acids Res.* 24: 3846-3857.
5. Niki, T., et al. 2000. MSSP, a protein binding to an origin of replication in the c-Myc gene, interacts with a catalytic subunit of DNA polymerase α and stimulates its polymerase activity. *FEBS Lett.* 475: 209-212.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602310. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Fritz, D. and Stefanovic, B. 2007. RNA-binding protein RBMS3 is expressed in activated hepatic stellate cells and liver fibrosis and increases expression of transcription factor Prx1. *J. Mol. Biol.* 371: 585-595.

CHROMOSOMAL LOCATION

Genetic locus: RBMS1 (human) mapping to 2q24.2; Rbms1 (mouse) mapping to 2 C1.2.

SOURCE

RBMS1 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of RBMS1 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 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107996 P, (100 μ g 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-107996 X, 200 μ g/0.1 ml.

APPLICATIONS

RBMS1 (Q-14) is recommended for detection of RBMS1 of mouse 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); non cross-reactive with family members RBMS2 or RBMS3.

RBMS1 (C-14) is also recommended for detection of RBMS1 in additional species, including equine and canine.

Suitable for use as control antibody for RBMS1 siRNA (h): sc-94943, RBMS1 siRNA (m): sc-152757, RBMS1 shRNA Plasmid (h): sc-94943-SH, RBMS1 shRNA Plasmid (m): sc-152757-SH, RBMS1 shRNA (h) Lentiviral Particles: sc-94943-V and RBMS1 shRNA (m) Lentiviral Particles: sc-152757-V.

RBMS1 (Q-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of RBMS1: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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.