

# RBMS3 (C-15): sc-103141

## BACKGROUND

RBMS3 (RNA binding motif, single stranded interacting protein 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. Localizing to the cytoplasm, RBMS3 is expressed in fetal and adult brain, lung and liver, as well as adult heart, placenta, muscle, pancreas and kidney. RBMS3 contains two RNP domains, namely RNP1-A and RNP1-B, both of which are necessary for RNA binding. RBMS3 specifically binds to poly(A) and poly(U) oligoribonucleotides *in vitro* and is believed to participate in RNA metabolism. In addition, RBMS3 expression is upregulated in activated hepatic stellate cells (HSCs) and it is believed to bind to and stabilize PRX1 mRNA, thereby contributing to the upregulation of collagen expression in liver fibrosis. Due to alternative splicing events, various isoforms exist for RBMS3.

## REFERENCES

1. 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.
2. 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.
3. Haigermoser, C., et al. 1996. Cloning and characterization of the genomic DNA of the human MSSP genes. *Nucleic Acids Res.* 24: 3846-3857.
4. Penkov, D., et al. 2000. Cloning of a human gene closely related to the genes coding for the c-myc single-strand binding proteins. *Gene* 243: 27-36.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605786. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Fritz, D., et al. 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.
7. Jiang, F., et al. 2008. Homeobox gene Prx1 is expressed in activated hepatic stellate cells and transactivates collagen  $\alpha 1(I)$  promoter. *Exp. Biol. Med.* 233: 286-296.

## CHROMOSOMAL LOCATION

Genetic locus: RBMS3 (human) mapping to 3p24.1.

## SOURCE

RBMS3 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of RBMS3 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103141 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

RBMS3 (C-15) is recommended for detection of RBMS3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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 RBMS1 or RBMS2.

RBMS3 (C-15) is also recommended for detection of RBMS3 in additional species, including canine.

Suitable for use as control antibody for RBMS3 siRNA (h): sc-78166, RBMS3 shRNA Plasmid (h): sc-78166-SH and RBMS3 shRNA (h) Lentiviral Particles: sc-78166-V.

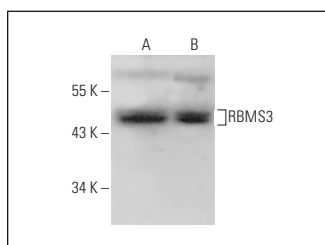
Molecular Weight of RBMS3: 48 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or THP-1 cell lysate: sc-2238.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



RBMS3 (C-15): sc-103141. Western blot analysis of RBMS3 expression in Hep G2 (A) and THP-1 (B) whole cell lysates.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.