

RBM9 (E-10): sc-271406

BACKGROUND

RBM9 (RNA binding motif protein 9), also known as RTA, fxb, FOX2, Fox-2, HNRBP2 or HRNBP2, is a 390 amino acid protein that contains one RRM (RNA recognition motif) domain. RBM9 is thought to be a key regulator of alternative exon splicing in the nervous system and other cell types. RBM9 regulates the splicing activity of the highly conserved RNA 5'-UGCAUGU-3' element, an intron splicing enhancer that is often located adjacent to tissue-specific alternative exons. RBM9 prevents binding of U2AF65 (U2 snRNP auxiliary factor large subunit) to the 3' splice site of the RNA splicing element which affects alternative splicing of tissue-specific exons. RBM9 also interacts with the ER α (estrogen receptor α) transcription factor and regulates ER α transcriptional activity. Eight isoforms of RBM9 exist due to alternative splicing events.

REFERENCES

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- Ponthier, J.L., et al. 2006. Fox-2 splicing factor binds to a conserved intron motif to promote inclusion of protein 4.1R alternative exon 16. *J. Biol. Chem.* 281: 12468-12474.
- Zhou, H.L., et al. 2007. Role for Fox-1/Fox-2 in mediating the neuronal pathway of calcitonin/calcitonin gene-related peptide alternative RNA processing. *Mol. Cell. Biol.* 27: 830-841.
- Yang, G., et al. 2008. Regulated Fox-2 isoform expression mediates protein 4.1R splicing during erythroid differentiation. *Blood* 111: 392-401.
- Zhang, C., et al. 2008. Defining the regulatory network of the tissue-specific splicing factors Fox-1 and Fox-2. *Genes Dev.* 22: 2550-2563.
- Zhou, H.L., et al. 2008. Repression of prespliceosome complex formation at two distinct steps by Fox-1/Fox-2 proteins. *Mol. Cell. Biol.* 28: 5507-5516.

CHROMOSOMAL LOCATION

Genetic locus: RBM9 (human) mapping to 22q12.3; Rbm9 (mouse) mapping to 15 D3.

SOURCE

RBM9 (E-10) is a mouse monoclonal antibody raised against amino acids 46-120 mapping near the N-terminus of RBM9 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

RBM9 (E-10) is recommended for detection of RBM9 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Suitable for use as control antibody for RBM9 siRNA (h): sc-76371, RBM9 siRNA (m): sc-152756, RBM9 shRNA Plasmid (h): sc-76371-SH, RBM9 shRNA Plasmid (m): sc-152756-SH, RBM9 shRNA (h) Lentiviral Particles: sc-76371-V and RBM9 shRNA (m) Lentiviral Particles: sc-152756-V.

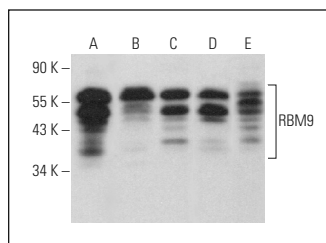
Molecular Weight of RBM9 isoforms 1-10: 38-47 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243, Neuro-2A whole cell lysate: sc-364185 or SH-SY5Y cell lysate: sc-3812.

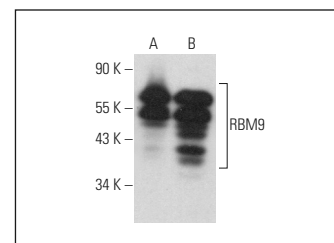
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



RBM9 (E-10): sc-271406. Western blot analysis of RBM9 expression in Neuro-2A (A), MDA-MB-231 (B), SH-SY5Y (C) and HUVEC-C (D) whole cell lysates and rat brain tissue extract (E).



RBM9 (E-10): sc-271406. Western blot analysis of RBM9 expression in 3T3-L1 (A) and F9 (B) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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