SANTA CRUZ BIOTECHNOLOGY, INC.

RBMY1 (K-16): sc-14574

BACKGROUND

The RBM (RNA-binding motif) gene family encodes proteins with an RNA binding motif. RBMY (RBM, Y chromosome) encodes a germ-cell specific nuclear protein involved in spermatogenesis. The RBM gene family, including RBMY1A, RBMY1B, RBMY1D, RBMY1E, RBMY1F, RBMY1H and RBMY1J, is comprised of at least 30 genes and pseudogenes, found on both arms of the Y chromosome. RBM X, an ancestral X chromosome homolog of the RBMY gene, encodes hnRNP G, which is widely expressed, whereas the RBMY gene evolved a male-specific function in spermatogenesis. Micro-deletions of the AZFb region of the Y chromosome, which contains a number of RBMY genes, usually result in severe consequences for spermatogenesis. RBM expression is localized to the nuclei of germ cells and RBM interacts with Tra2β. Tra2β is a ubiquitous activator of pre-mRNA splicing, but is most highly expressed in testis, suggesting a role for RBM in Tra2β-dependent splicing in spermatocytes. The human RBMX gene maps to chromosome Xq26 and the RBMY gene family is found on all mammalian Y chomosomes.

REFERENCES

1. Chai, N.N., Zhou, H., Hernandez, J., Najmabadi, H., Bhasin, S. and Yen, P.H. 1998. Structure and organization of the RBM Y genes on the human Y chromosome: transposition and amplification of an ancestral autosomal hnRNPG gene. Genomics 49: 283-289.
2. Mazeyrat, S., Saut, N., Mattei, M.G. and Mitchell, M.J. 1999. RBM Y evolved on the Y chromosome from a ubiquitously transcribed X-Y identical gene. Nat. Genet. 22: 224-226.
3. Elliott, D.J., Bourgeois, C.F., Klink, A., Stevenin, J. and Cooke, H.J. 2000. A mammalian germ cell-specific RNA-binding protein interacts with ubiquitously expressed proteins involved in splice site selection. Proc. Natl. Acad. Sci. USA 97: 5717-5722.
4. Elliott, D.J. 2000. RBM Y genes and AZFb deletions. J. Endocrinol. Invest. 23: 652-668.
5. Venables, J.P., Elliott, D.J., Makarova, O.V., Makarov, E.M., Cooke, H.J. and Eperon, I.C. 2000. RBM Y, a probable human spermatogenesis factor, and other hnRNP G proteins interact with Tra2β and affect splicing. Hum. Mol. Genet. 9: 685-694.
6. LocusLink Report (LocusID: 27316) http://www.ncbi.nlm.nih.gov/LocusLink/

SOURCE

RBMY1 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RBMY1A1 of human origin.

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-14574 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

RBMY1 (K-16) is recommended for detection of RBMY1A, RBMY1B, RBMY1D, RBMY1E, RBMY1F, RBMY1H and RBMY1J of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 RBMY1 siRNA (h): sc-270225, RBMY1 shRNA Plasmid (h): sc-270225-SH and RBMY1 shRNA (h) Lentiviral Particles: sc-270225-V.

Molecular Weight of RBMY1A-F/J: 56 kDa.

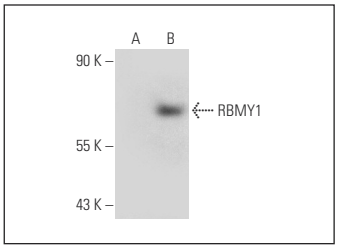
Molecular Weight of RBMY1H: 41 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181 or RBMY1F (h): 293T Lysate: sc-171485.

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



RBMY1 (K-16): sc-14574. Western blot analysis of RBMY1 expression in non-transfected: sc-117752 (**A**) and human RBMY1F transfected: sc-171485 (**B**) 293T 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.

PROTOCOLS

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