

RBM Y1 (H-40): sc-28727

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 Tra2 β . Tra2 β is a ubiquitous activator of pre-mRNA splicing, but is most highly expressed in testis, suggesting a role for RBM in Tra2 β -dependent splicing in spermatocytes. The human RBMX gene maps to chromosome Xq26 and the RBMY gene family is found on all mammalian Y chromosomes.

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 hnRNP G 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.

CHROMOSOMAL LOCATION

Genetic locus: RBMY1B/RBMY1D/RBMY1E/RBMY1F/RBMY1HP/RBMY1J (human) mapping to Yq11.223.

SOURCE

RBM Y1 (H-40) is a rabbit polyclonal antibody raised against amino acids 373-412 mapping within an internal region of RBMY1A1 of human origin.

PRODUCT

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

STORAGE

Store at 4 $^{\circ}$ 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.

APPLICATIONS

RBM Y1 (H-40) 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 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), immunohistochemistry (including paraffin-embedded sections) (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.

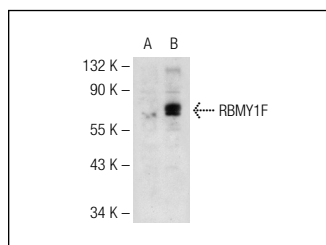
Molecular Weight of RBMY1H: 41 kDa.

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

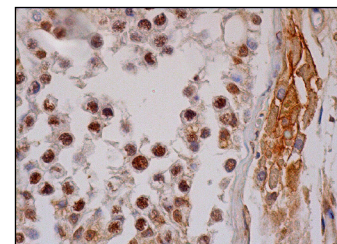
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



RBM Y1 (H-40): sc-28727. Western blot analysis of RBMY1F expression in non-transfected: sc-117752 (A) and human RBMY1F transfected: sc-171485 (B) 293T whole cell lysates.



RBM Y1 (H-40): sc-28727. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts.

PROTOCOLS

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