

RBMXL2 (RR-17): sc-101134

BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to mRNA transcription and pre-mRNA processing, as well as mature mRNA transport to the cytoplasm and translation. They also bind heterogeneous nuclear RNA (hnRNA), which are the transcripts produced by RNA polymerase II. There are approximately 20 known hnRNP proteins, and their complexes are the major constituents of the spliceosome. The majority of hnRNP proteins are localized to the nucleus; however some shuttle between the nucleus and the cytoplasm. RBMXL2 (RNA binding motif protein, X-linked-like 2), also known as hnRP G-T (heterogeneous nuclear ribonucleoprotein G-T) or hnRNP G-T, is a testis-specific hnRNP that is predominantly expressed in meiotic spermatocytes. Localizing to the nucleus, RBMXL2 contains one RNA recognition motif (RRM) and may replace the function of hnRP G, acting as a germ cell-specific splicing regulator. Due to its specific function in spermatocytes, RBMXL2 is implicated in autosomal male infertility.

REFERENCES

1. Badolato, J., et al. 1995. Identification and characterisation of a novel human RNA-binding protein. *Gene* 166: 323-337.
2. Siomi, H., et al. 1995. A nuclear localization domain in the hnRNP A1 protein. *J. Cell Biol.* 129: 551-560.
3. Myer, V.E., et al. 1995. Isolation and characterization of a novel, low abundance hnRNP protein: A0. *RNA* 1: 171-182.
4. Hanamura, A., et al. 1998. Regulated tissue-specific expression of antagonistic pre-mRNA splicing factors. *RNA* 4: 430-444.
5. Melcak, I., et al. 2000. Nuclear pre-mRNA compartmentalization: trafficking of released transcripts to splicing factor reservoirs. *Mol. Biol. Cell* 11: 497-510.
6. Elliott, D.J., et al. 2000. An evolutionarily conserved germ cell-specific hnRNP is encoded by a retrotransposed gene. *Hum. Mol. Genet.* 9: 2117-2124.
7. Maymon, B.B., et al. 2002. Localization of the germ cell-specific protein, hnRNP G-T, in testicular biopsies of azoospermic men. *Acta Histochem.* 104: 255-261.

CHROMOSOMAL LOCATION

Genetic locus: RBMXL2 (human) mapping to 11p15.4.

SOURCE

RBMXL2 (RR-17) is a mouse monoclonal antibody raised against recombinant RBMXL2 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ 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

RBMXL2 (RR-17) is recommended for detection of RBMXL2 of mouse, rat and 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), 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 RBMXL2 siRNA (h): sc-96516, RBMXL2 siRNA (m): sc-152761, RBMXL2 shRNA Plasmid (h): sc-96516-SH, RBMXL2 shRNA Plasmid (m): sc-152761-SH, RBMXL2 shRNA (h) Lentiviral Particles: sc-96516-V and RBMXL2 shRNA (m) Lentiviral Particles: sc-152761-V.

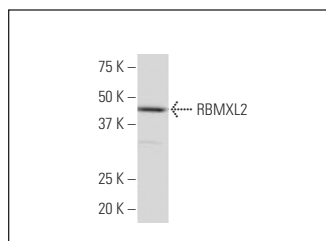
Molecular Weight of RBMXL2: 43 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or mouse testis extract: sc-2405.

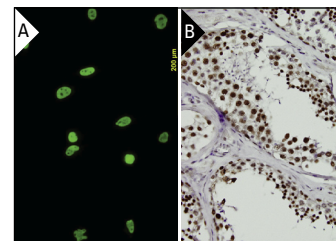
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



RBMXL2 (RR-17): sc-101134. Western blot analysis of RBMXL2 expression in HeLa whole cell lysate.



RBMXL2 (RR-17): sc-101134. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human testis tissue showing nuclear localization (B).

SELECT PRODUCT CITATIONS

1. Murakami, Y., et al. 2022. Testis-specific hnRNP is expressed in colorectal cancer cells and accelerates cell growth mediating ZDHHC11 mRNA stabilization. *Cancer Med.* 11: 3643-3656.

RESEARCH USE

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