SANTA CRUZ BIOTECHNOLOGY, INC.

RBM28 (Z-22): sc-102075

BACKGROUND

The RBM (RNA-binding motif) gene family encodes proteins with an RNA binding motif. RBM28 (RNA-binding motif protein 28) is a 759 amino acid protein that is suggested to be involved in ribosomal biogenesis. Localized to the nucleolus, the four RNA recognition motif (RRM) domain-containing RBM28 has been identified to interact with spliceosomal small nuclear RNAs (snRNAs). Mutations in the RRM3 domain of yeast NOP4 (a homolog of RBM28) lead to ribosomal depletion due to defective assembly of the 60S subunit, suggesting a functional role of RBM28 in the production of ribosomal machinery. A homozygous missense mutation in RBM28 is the cause of alopecia, neurological defects and endocrinopathy (ANE) syndrome, in which affected individuals suffer hair loss, severe mental retardation and central hypogonadotropic hypogonadism. The afflictions of this disease suggest that RBM28 is required for normal development of the hair follicle, the hypothalamic-hypophyseal axis and the nervous system.

REFERENCES

1. Sun, C. and Woolford, J.L. 1997. The yeast nucleolar protein Nop4p contains four RNA recognition motifs necessary for ribosome biogenesis. J. Biol. Chem. 272: 25345-25352.
2. Online Mendelian Inheritance in Man, OMIM™. 2002 Johns Hopkins University, Baltimore, MD. MIM Number: 612074. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Sutherland, L.C., et al. 2005. RNA binding motif (RBM) proteins: a novel family of apoptosis modulators? J. Cell. Biochem. 94: 5-24.
4. Damianov, A., et al. 2006. Human RBM28 protein is a specific nucleolar component of the spliceosomal snRNPs. Biol. Chem. 387: 1455-1460.
5. Nousbeck, J., et al. 2008. Alopecia, neurological defects, and endocrinopathy syndrome caused by decreased expression of RBM28, a nucleolar protein associated with ribosome biogenesis. Am. J. Hum. Genet. 82: 1114-1121.

CHROMOSOMAL LOCATION

Genetic locus: RBM28 (human) mapping to 7q32.1; Rbm28 (mouse) mapping to 6 A3.3.

SOURCE

RBM28 (Z-22) is a purified rabbit polyclonal antibody raised against RBM28 of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

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.

APPLICATIONS

RBM28 (Z-22) is recommended for detection of RBM28 of mouse, human and dog 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 RBM28 siRNA (h): sc-89378, RBM28 siRNA (m): sc-152739, RBM28 shRNA Plasmid (h): sc-89378-SH, RBM28 shRNA Plasmid (m): sc-152739-SH, RBM28 shRNA (h) Lentiviral Particles: sc-89378-V and RBM28 shRNA (m) Lentiviral Particles: sc-152739-V.

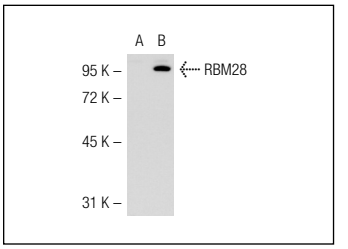
Molecular Weight of RBM28: 85 kDa.

Positive Controls: RBM28 (m3): 293T Lysate: sc-123006.

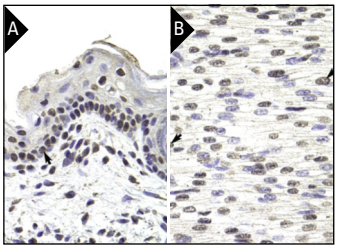
RECOMMENDED SECONDARY REAGENTS

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



RBM28 (Z-22): sc-102075. Western blot analysis of RBM28 expression in non-transfected: sc-117752 (**A**) and mouse RBM28 transfected: sc-123006 (**B**) 293T whole cell lysates.



RBM28 (Z-22): sc-102075. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin (**A**) and human heart (**B**) tissue showing nuclear staining.

PROTOCOLS

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