SANTA CRUZ BIOTECHNOLOGY, INC.

RBM25 (H-4): sc-374271

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The Power to Question

BACKGROUND

RMB25 (RNA binding motif protein 25), also known as S164, RNPC7, RED120 or fSAP94, is a 784 amino acid protein that contains one PWI domain and one RRM (RNA recognition motif) domain. Localized to the cytoplasm, as well as to nuclear speckles, RBM25 functions as a splicing factor that is thought to stabilize the pre-mRNA-U1 snRNP complex and may couple splicing with mRNA 3'-end formation. The gene encoding RBM25 maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presinilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder α1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

1. Godbolt, A.K., et al. 2004. A presenilin 1 R278I mutation presenting with language impairment. Neurology 63: 1702-1704.
2. Stolk, J., et al. 2006. α1-antitrypsin deficiency: current perspective on research, diagnosis, and management. Int. J. Chron. Obstruct. Pulmon. Dis. 1: 151-160.
3. Vetrivel, K.S., et al. 2006. Pathological and physiological functions of presenilins. Mol. Neurodegener. 1: 4.
4. Albani, D., et al. 2007. Presenilin-1 mutation E318G and familial Alzheimer's disease in the Italian population. Neurobiol. Aging 28: 1682-1688.

CHROMOSOMAL LOCATION

Genetic locus: RBM25 (human) mapping to 14q24.2; Rbm25 (mouse) mapping to 12 D1.

SOURCE

RBM25 (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 147-185 within an internal region of RBM25 of human origin.

PRODUCT

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

RBM25 (H-4) is available conjugated to agarose (sc-374271 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374271 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374271 PE), fluorescein (sc-374271 FITC), Alexa Fluor® 488 (sc-374271 AF488), Alexa Fluor® 546 (sc-374271 AF546), Alexa Fluor® 594 (sc-374271 AF594) or Alexa Fluor® 647 (sc-374271 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374271 AF680) or Alexa Fluor® 790 (sc-374271 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374271 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

RBM25 (H-4) is recommended for detection of RBM25 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

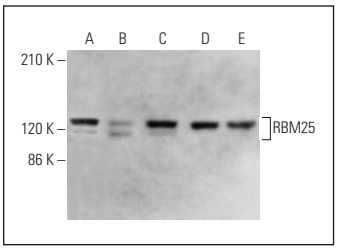
RBM25 (H-4) is also recommended for detection of RBM25 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for RBM25 siRNA (h): sc-92256, RBM25 siRNA (m): sc-152736, RBM25 shRNA Plasmid (h): sc-92256-SH, RBM25 shRNA Plasmid (m): sc-152736-SH, RBM25 shRNA (h) Lentiviral Particles: sc-92256-V and RBM25 shRNA (m) Lentiviral Particles: sc-152736-V.

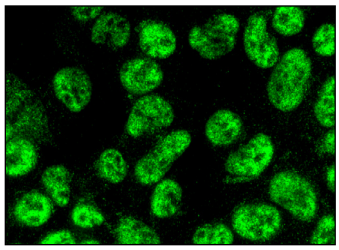
Molecular Weight of RBM25: 120 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, c4 whole cell lysate: sc-364186 or 3T3-L1 cell lysate: sc-2243.

DATA



RBM25 (H-4): sc-374271. Western blot analysis of RBM25 expression in SUP-T1 (**A**), BYDP (**B**), Hep G2 (**C**), c4 (**D**) and 3T3-L1 (**E**) whole cell lysates.



RBM25 (H-4): sc-374271. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Ge, Y., et al. 2019. The splicing factor RBM25 controls MYC activity in acute myeloid leukemia. Nat. Commun. 10: 172.
2. Cinque, L., et al. 2020. Rare somatic MEN1 gene pathogenic variant in a patient affected by atypical parathyroid adenoma. Int. J. Endocrinol. 2020: 2080797.
3. Zhang, Q., et al. 2021. Nuclear speckle specific hnRNP D-like prevents age- and AD-related cognitive decline by modulating RNA splicing. Mol. Neurodegener. 16: 66.

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.