SANTA CRUZ BIOTECHNOLOGY, INC.

RBM14 (4E1): sc-517183

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The Power to Question

BACKGROUND

RBM14 (RNA-binding protein 14), also known as SIP, CoAA, PSP2, SYTIP1 or TMEM137, is a 669 amino acid protein that localizes to the nucleus and contains 2 RRM (RNA recognition motif) domains. Expressed ubiquitously with higher expression in heart, brain, liver, kidney, colon, lung and skeletal muscle, RBM14 exists as two alternatively spliced isoforms which exhibit different cellular functions. Isoform one, designated CoAA, is thought to function as a nuclear receptor coactivator which interacts with MSG1 and PRIP and, via these interactions, may enhance transcription. Alternatively, isoform two, known as CoAM, is thought to function as a transcriptional repressor which may modulate the transcriptional activities of coactivators, including CoAA. Via its ability to control transcription, RBM14 may be involved in the pathogenesis of several cancers, such as kidney cell carcinoma.

REFERENCES

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2. Fox, A.H., et al. 2002. Paraspeckles: a novel nuclear domain. Curr. Biol. 12: 13-25.
3. Perani, M., et al. 2005. The proto-oncoprotein SYT interacts with SYT-interacting protein/coactivator activator (SIP/CoAA), a human nuclear receptor coactivator with similarity to EWS and TLS/FUS family of proteins. J. Biol. Chem. 280: 42863-42876.
4. Yang, Z., et al. 2007. Switched alternative splicing of oncogene CoAA during embryonal carcinoma stem cell differentiation. Nucleic Acids Res. 35: 1919-1932.
5. Sui, Y., et al. 2007. Gene amplification and associated loss of 5' regulatory sequences of CoAA in human cancers. Oncogene 26: 822-835.
6. Kang, Y.K., et al. 2008. Dual roles for coactivator activator and its counterbalancing isoform coactivator modulator in human kidney cell tumorigenesis. Cancer Res. 68: 7887-7896.
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CHROMOSOMAL LOCATION

Genetic locus: RBM14 (human) mapping to 11q13.2; Rbm14 (mouse) mapping to 19 A.

SOURCE

RBM14 (4E1) is a mouse monoclonal antibody raised against amino acids 51-160 representing partial length RBM14 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

RBM14 (4E1) is recommended for detection of RBM14 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RBM14 siRNA (h): sc-96838, RBM14 siRNA (m): sc-152728, RBM14 shRNA Plasmid (h): sc-96838-SH, RBM14 shRNA Plasmid (m): sc-152728-SH, RBM14 shRNA (h) Lentiviral Particles: sc-96838-V and RBM14 shRNA (m) Lentiviral Particles: sc-152728-V.

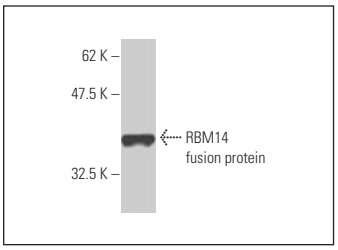
Molecular Weight of RBM14 CoAA isoform: 69 kDa.

Molecular Weight of RBM14 CoAM isoform: 17 kDa.

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, 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).

DATA



RBM14 (4E1): sc-517183. Western blot analysis of human recombinant RBM14 fusion protein.

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.

PROTOCOLS

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