SANTA CRUZ BIOTECHNOLOGY, INC.

RBM14 (Q-24): sc-133944



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 two 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

- Iwasaki, T., Chin, W.W. and Ko, L. 2001. Identification and characterization of RRM-containing coactivator activator (CoAA) as TRBP-interacting protein, and its splice variant as a coactivator modulator (CoAM). J. Biol. Chem. 276: 33375-33383.
- Fox, A.H., Lam, Y.W., Leung, A.K., Lyon, C.E., Andersen, J., Mann, M. and Lamond, A.I. 2002. Paraspeckles: a novel nuclear domain. Curr. Biol. 12: 13-25.
- Perani, M., Antonson, P., Hamoudi, R., Ingram, C.J., Cooper, C.S., Garrett, M.D. and Goodwin, G.H. 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.
- Yang, Z., Sui, Y., Xiong, S., Liour, S.S., Phillips, A.C. and Ko, L. 2007. Switched alternative splicing of oncogene CoAA during embryonal carcinoma stem cell differentiation. Nucleic Acids Res. 35: 1919-1932.
- Sui, Y., Yang, Z., Xiong, S., Zhang, L., Blanchard, K.L., Peiper, S.C., Dynan, W.S., Tuan, D. and Ko, L. 2007. Gene amplification and associated loss of 5' regulatory sequences of CoAA in human cancers. Oncogene 26: 822-835.
- Kang, Y.K., Schiff, R., Ko, L., Wang, T., Tsai, S.Y., Tsai, M.J. and O'Malley, B.W. 2008. Dual roles for coactivator activator and its counterbalancing isoform coactivator modulator in human kidney cell tumorigenesis. Cancer Res. 68: 7887-7896.
- 7. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612409: World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: Rbm14 (mouse) mapping to 19 A.

SOURCE

RBM14 (Q-24) is a Protein A purified rabbit polyclonal antibody raised against synthetic RBM14 peptide of mouse origin.

PRODUCT

Each vial contains 100 μg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and <0.02% sucrose.

APPLICATIONS

RBM14 (0-24) is recommended for detection of RBM14 of mouse and rat 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight of RBM14 CoAA isoform: 69 kDa.

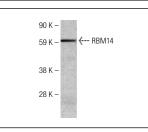
Molecular Weight of RBM14 CoAM isoform: 17 kDa.

Positive Controls: SP2/0 whole cell lysate.

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).





RBM14 (Q-24): sc-133944. Western blot analysis of RBM14 expression in SP2/0 whole cell lysate.

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 or our catalog for detailed protocols and support products.