SANTA CRUZ BIOTECHNOLOGY, INC.

RBM38 (m2): 293T Lysate: sc-127449

BACKGROUND

Damage to nuclear DNA can lead to unregulated cell division and ultimately the formation of a cancerous tumor. Recognition and repair of damaged DNA is initiated by proteins, such as p53, that regulate the cell cycle. p53 is a transcription factor that induces cell cycle arrest at the G_1/S regulation point when it functions to either activate repair proteins or initiate apoptosis. One protein induced by wildtype p53 is RBM38 (RNA-binding protein 38), also known as RNPC1 or SEB4. RBM38 is a cell cycle protein found in the cytosol and the nucleus that exists as 2 alternatively spliced isoforms, 1 (RNPC1a) and 2 (RNPC1b), of 239 and 121 amino acids, respectively. Independent of p53 expression, RBM38 isoform 1 induces cell cycle arrest in G_1 phase through maintaining transcript stability at the 3'-UTR of p21, a regulator of cell cycle progression at S phase. RBM38 is also an mRNA splicing factor that regulates the expression of FGFR2. RBM38 contains one RRM (RNA recognition motif) domain.

REFERENCES

1. Banks, L., Matlashewski, G. and Crawford, L. 1986. Isolation of human-p53-specific monoclonal antibodies and their use in the studies of human p53 expression. Eur. J. Biochem. 159: 529-534.
2. Hupp, T.R., Meek, D.W., Midgley, C.A. and Lane, D.P. 1992. Regulation of the specific DNA binding function of p53. Cell 71: 875-886.
3. Appella, E. and Anderson, C.W. 2000. Signaling to p53: breaking the post-translational modification code. Pathol. Biol. 48: 227-245.
4. Krackhardt, A.M., Witzens, M., Harig, S., Hodi, F.S., Zauls, A.J., Chessia, M., Barrett, P. and Gribben, J.G. 2002. Identification of tumor-associated antigens in chronic lymphocytic leukemia by SEREX. Blood 100: 2123-2131.
5. Shu, L., Yan, W. and Chen, X. 2006. RNPC1, an RNA-binding protein and a target of the p53 family, is required for maintaining the stability of the basal and stress-induced p21 transcript. Genes Dev. 20: 2961-2972.
6. Warzecha, C.C., Sato, T.K., Nabet, B., Hogenesch, J.B. and Carstens, R.P. 2009. ESRP1 and ESRP2 are epithelial cell-type-specific regulators of FGFR2 splicing. Mol. Cell 33: 591-601.

CHROMOSOMAL LOCATION

Genetic locus: Rbm38 (mouse) mapping to 2 H3.

PRODUCT

RBM38 (m2): 293T Lysate represents a lysate of mouse RBM38 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

RBM38 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive RBM38 antibodies. Recommended use: 10-20 µl per lane.

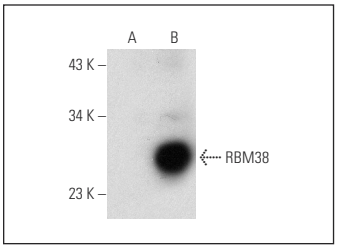
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RBM38 (A-8): sc-365898 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse RBM38 expression in RBM38 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



RBM38 (A-8): sc-365898. Western blot analysis of RBM38 expression in non-transfected: sc-117752 (**A**) and mouse RBM38 transfected: sc-127449 (**B**) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.