SANTA CRUZ BIOTECHNOLOGY, INC.

RBM38 (P-13): sc-85874

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 two 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., et al. 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., et al. 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., et al. 2002. Identification of tumor-associated antigens in chronic lymphocytic leukemia by SEREX. Blood 100: 2123-2131.
5. Shu, L., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: RBM38 (human) mapping to 20q13.31; Rbm38 (mouse) mapping to 2 H3.

SOURCE

RBM38 (P-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of RBM38 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-85874 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

RBM38 (P-13) is recommended for detection of RBM38 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)], 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); non cross-reactive with other RBM family members.

RBM38 (P-13) is also recommended for detection of RBM38 in additional species, including canine and porcine.

Suitable for use as control antibody for RBM38 siRNA (h): sc-76368, RBM38 siRNA (m): sc-152747, RBM38 shRNA Plasmid (h): sc-76368-SH, RBM38 shRNA Plasmid (m): sc-152747-SH, RBM38 shRNA (h) Lentiviral Particles: sc-76368-V and RBM38 shRNA (m) Lentiviral Particles: sc-152747-V.

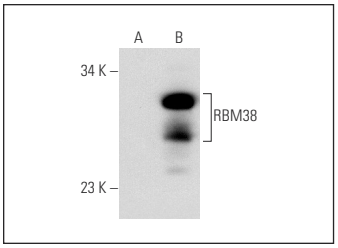
Molecular Weight of RBM38 isoforms: 13/25 kDa.

Positive Controls: RBM38 (h): 293T Lysate: sc-174921.

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.

DATA



RBM38 (P-13): sc-85874. Western blot analysis of RBM38 expression in non-transfected: sc-117752 (**A**) and human RBM38 transfected: sc-174921 (**B**) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.