SANTA CRUZ BIOTECHNOLOGY, INC.

RBQ-3 (A-8): sc-374481

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. RBQ-3, also known as RBBP5 (retinoblastoma binding protein 5) or SWD1, is a 538 amino acid protein that localizes to the nucleus and contains six WD repeats. Expressed ubiquitously, RBQ-3 functions as a component of the Set1 complex and preferentially binds to underphosphorylated forms of the retinoblastoma (Rb) protein, possibly playing a role in the regulation of cell proliferation. RBQ-3 exists as two alternatively spliced isoforms and, upon DNA damage, is subject to phosphorylation by ATM or ATR.

REFERENCES

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2. Neer, E.J., et al. 1994. The ancient regulatory-protein family of WD-repeat proteins. Nature 371: 297-300.
3. Saijo, M., et al. 1995. Molecular cloning of a human protein that binds to the retinoblastoma protein and chromosomal mapping. Genomics 27: 511-519.
4. Smith, T.F., et al. 1999. The WD repeat: a common architecture for diverse functions. Trends Biochem. Sci. 24: 181-185.
5. Li, D., et al. 2001. WD-repeat proteins: structure characteristics, biological function, and their involvement in human diseases. Cell. Mol. Life Sci. 58: 2085-2097.
6. Higa, L.A., et al. 2006. CUL4-DDB1 ubiquitin ligase interacts with multiple WD40-repeat proteins and regulates histone methylation. Nat. Cell Biol. 8: 1277-1283.
7. Lee, J.H., et al. 2007. Identification and characterization of the human Set1B Histone H3-Lys4 methyltransferase complex. J. Biol. Chem. 282: 13419-13428.
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CHROMOSOMAL LOCATION

Genetic locus: RBBP5 (human) mapping to 1q32.1; Rbbp5 (mouse) mapping to 1 E4.

SOURCE

RBQ-3 (A-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 445-481 within an internal region of RBQ-3 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-374481 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

RBQ-3 (A-8) is recommended for detection of RBQ-3 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).

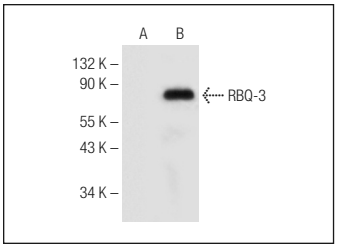
RBQ-3 (A-8) is also recommended for detection of RBQ-3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for RBQ-3 siRNA (h): sc-76373, RBQ-3 siRNA (m): sc-76374, RBQ-3 shRNA Plasmid (h): sc-76373-SH, RBQ-3 shRNA Plasmid (m): sc-76374-SH, RBQ-3 shRNA (h) Lentiviral Particles: sc-76373-V and RBQ-3 shRNA (m) Lentiviral Particles: sc-76374-V.

Molecular Weight of RBQ-3: 66 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, RBQ-3 (h): 293T Lysate: sc-116474 or Hep G2 cell lysate: sc-2227.

DATA



RBQ-3 (A-8): sc-374481. Western blot analysis of RBQ-3 expression in non-transfected: sc-117752 (**A**) and human RBQ-3 transfected: sc-116474 (**B**) 293T whole cell lysates.

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.