RBQ-3 (K-20): sc-79012



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

- van der Voorn, L. and Ploegh, H.L. 1992. The WD-40 repeat. FEBS Lett. 307: 131-134.
- Neer, E.J., Schmidt, C.J., Nambudripad, R. and Smith, T.F. 1994. The ancient regulatory-protein family of WD-repeat proteins. Nature 371: 297-300.
- 3. Saijo, M., Sakai, Y., Kishino, T., Niikawa, N., Matsuura, Y., Morino, K., Tamai, K. and Taya, Y. 1995. Molecular cloning of a human protein that binds to the retinoblastoma protein and chromosomal mapping. Genomics 27: 511-519.
- Smith, T.F., Gaitatzes, C., Saxena, K. and Neer, E.J. 1999. The WD repeat: a common architecture for diverse functions. Trends Biochem. Sci. 24: 181-185.
- 5. Li, D. and Roberts, R. 2001. WD-repeat proteins: structure characteristics, biological function, and their involvement in human diseases. Cell. Mol. Life Sci. 58: 2085-2097.
- Higa, L.A., Wu, M., Ye, T., Kobayashi, R., Sun, H. and Zhang, H. 2006. CUL-4-DDB1 ubiquitin ligase interacts with multiple WD40-repeat proteins and regulates histone methylation. Nat. Cell Biol. 8: 1277-1283.
- 7. Lee, J.H., Tate, C.M., You, J.S. and Skalnik, D.G. 2007. Identification and characterization of the human Set1B Histone H3-Lys4 methyltransferase complex. J. Biol. Chem. 282: 13419-13428.

CHROMOSOMAL LOCATION

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

SOURCE

RBQ-3 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RBQ-3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-79012 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RBQ-3 (K-20) is recommended for detection of RBQ-3 of mouse, rat and human 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)], 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 (K-20) 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.

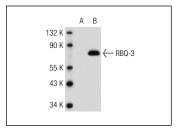
Molecular Weight of RBQ-3: 66 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



RBQ-3 (K-20): sc-79012. 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.

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.