

# RBQ-3 (D-7): sc-390954

## 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

1. van der Voorn, L., et al. 1992. The WD-40 repeat. *FEBS Lett.* 307: 131-134.
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.

## CHROMOSOMAL LOCATION

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

## SOURCE

RBQ-3 (D-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 499-526 at the C-terminus of RBQ-3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390954 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

RBQ-3 (D-7) 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 (D-7) is also recommended for detection of RBQ-3 in additional species, including equine, canine, bovine and porcine.

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.

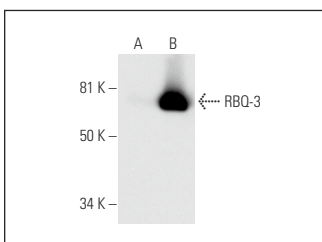
Molecular Weight of RBQ-3: 66 kDa.

Positive Controls: RBQ-3 (h): 293T Lysate: sc-116474 or Y79 cell lysate: sc-2240.

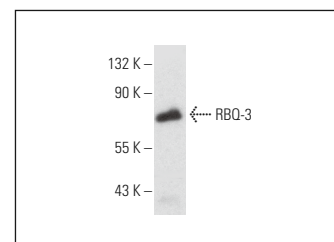
## RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



RBQ-3 (D-7): sc-390954. 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.



RBQ-3 (D-7): sc-390954. Western blot analysis of RBQ-3 expression in Y79 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.