

# RGC32 (D-16): sc-84223



The Power to Question

## BACKGROUND

RGC32 (response gene to complement 32), also known as C13orf15, is a 137 amino acid protein that localizes to the cytoplasm, as well as to the nucleus and the centrosome. Expressed at high levels in kidney, pancreas and skeletal muscle and at lower levels in brain, heart and placenta, RGC32 functions to modulate the activity of cell cycle-specific kinases, thereby regulating cell cycle progression. Additionally, RGC32 may promote cell cycle arrest at the G<sub>2</sub>/M phase transition and is thought to inhibit the growth of glioma cells, possibly functioning as a tumor suppressor. Conversely, overexpression of RGC32 may promote cell replication and assist in the pathogenesis of malignancies, suggesting that RGC32 also participates in tumor transformation and progression. RGC32 activity is induced by complement activation and by p53 in response to DNA damage. Multiple isoforms of RGC32 exist as a result of alternative splicing events.

## REFERENCES

1. Badea, T.C., Niculescu, F.I., Soane, L., Shin, M.L. and Rus, H. 1998. Molecular cloning and characterization of RGC-32, a novel gene induced by complement activation in oligodendrocytes. *J. Biol. Chem.* 273: 26977-26981.
2. Badea, T., Niculescu, F., Soane, L., Fosbrink, M., Sorana, H., Rus, V., Shin, M.L. and Rus, H. 2002. RGC32 increases p34Cdc2 kinase activity and entry of aortic smooth muscle cells into S-phase. *J. Biol. Chem.* 277: 502-508.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610077. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Fosbrink, M., Cudrici, C., Niculescu, F., Badea, T.C., David, S., Shamsuddin, A., Shin, M.L. and Rus, H. 2005. Overexpression of RGC32 in colon cancer and other tumors. *Exp. Mol. Pathol.* 78: 116-122.
5. Fosbrink, M., Niculescu, F. and Rus, H. 2005. The role of c5b-9 terminal complement complex in activation of the cell cycle and transcription. *Immunol. Res.* 31: 37-46.

## CHROMOSOMAL LOCATION

Genetic locus: C13orf15 (human) mapping to 13q14.11; 1190002H23Rik (mouse) mapping to 14 D3.

## SOURCE

RGC32 (D-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of RGC32 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-84223 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

RGC32 (D-16) is recommended for detection of RGC32 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for RGC32 siRNA (h): sc-106499, RGC32 siRNA (m): sc-152835, RGC32 siRNA (r): sc-156105, RGC32 shRNA Plasmid (h): sc-106499-SH, RGC32 shRNA Plasmid (m): sc-152835-SH, RGC32 shRNA Plasmid (r): sc-156105-SH, RGC32 shRNA (h) Lentiviral Particles: sc-106499-V, RGC32 shRNA (m) Lentiviral Particles: sc-152835-V and RGC32 shRNA (r) Lentiviral Particles: sc-156105-V.

Molecular Weight of RGC32: 14 kDa.

## 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) 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.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.