



Centrin-2 (N-17)-R: sc-27793-R

BACKGROUND

Centrin-2, an EF-hand protein, plays a critical role in normal cell division. Tissues where cilia are present, such as the retina and testis, express both Centrin-1 and -2, but Centrin-2 is also expressed in non-differentiated, non-ciliated retinal cells (retinoblastoma cells), liver, skeletal muscle, and cardiac muscle. In these tissues, centrin associates with the centrosomes, mitotic spindle poles, and basal bodies. Knockdown studies reveal a requirement for centrin in centriole duplication and organization of spindle pole morphology and the completion of cytokinesis. Additionally, Centrin-2 plays a role in nucleotide excision repair via association with xeroderma pigmentosum group C protein, suggesting possible coupling of cell division and nucleotide excision repair.

REFERENCES

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3. Durussel, I., Blouquit, Y., Middendorp, S., Craescu, C.T. and Cox, J.A. 2000. Cation- and peptide-binding properties of human Centrin-2. *FEBS Lett.* 472: 208-212.
4. Araki, M., Masutani, C., Takemura, M., Uchida, A., Sugawara, K., Kondoh, J., Ohkuma, Y. and Hanaoka, F. 2001. Centrosome protein Centrin-2/caltractin 1 is part of the xeroderma pigmentosum group C complex that initiates global genome nucleotide excision repair. *J. Biol. Chem.* 276: 18665-18672.
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7. Matei, E., Miron, S., Blouquit, Y., Duchambon, P., Durussel, I., Cox, J.A. and Craescu, C.T. 2003. C-terminal half of human Centrin-2 behaves like a regulatory EF-hand domain. *Biochemistry* 42: 1439-1450.

CHROMOSOMAL LOCATION

Genetic locus: CETN2 (human) mapping to Xq28; Ctn2 (mouse) mapping to X B.

SOURCE

Centrin-2 (N-17)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of Centrin-2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-27793 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Centrin-2 (N-17)-R is recommended for detection of Centrin-2 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).

Suitable for use as control antibody for Centrin-2 siRNA (h): sc-43681, Centrin-2 siRNA (m): sc-72106, Centrin-2 shRNA Plasmid (h): sc-43681-SH, Centrin-2 shRNA Plasmid (m): sc-72106-SH, Centrin-2 shRNA (h) Lentiviral Particles: sc-43681-V and Centrin-2 shRNA (m) Lentiviral Particles: sc-72106-V.

Molecular Weight of Centrin-2: 20 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) 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.

SELECT PRODUCT CITATIONS

1. Hong, K.U., Park, Y.S., Seong, Y.S., Kang, D., Bae, C.D. and Park, J. 2007. Functional importance of the anaphase-promoting complex-Cdh1-mediated degradation of TMAP/CKAP2 in regulation of spindle function and cytokinesis. *Mol. Cell. Biol.* 27: 3667-3681.
2. Nakanishi, A., Han, X., Saito, H., Taguchi, K., Ohta, Y., Imajoh-Ohmi, S. and Miki, Y. 2007. Interference with BRCA2, which localizes to the centrosome during S and early M phase, leads to abnormal nuclear division. *Biochem. Biophys. Res. Commun.* 355: 34-40.
3. Ganem, N.J., Godinho, S.A. and Pellman, D. 2009. A mechanism linking extra centrosomes to chromosomal instability. *Nature* 460: 278-282.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.