# SANTA CRUZ BIOTECHNOLOGY, INC.

# Centrin-3 (H-47): sc-99201



# BACKGROUND

The EF-hand type Ca<sup>2+</sup>-binding proteins family consists of several members, including Centrin-1, Centrin-2 and Centrin-3. The Centrin proteins are ubiquitously expressed cytoskeletal components that show increased expression during cell differentiation. Tissues where cilia are present, such as the retina and testis, express both Centrin-1 and -2, but Centrin-2 is also expressed in nondifferentiated, nonciliated 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. Centrin-3 plays a role in centrosome reproduction.

# REFERENCES

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- Wolfrum, U., et al. 1998. Expression of centrin isoforms in the mammalian retina. Exp. Cell Res. 242: 10-17.
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- Laoukili, J., et al. 2000. Differential expression and cellular distribution of centrin isoforms during human ciliated cell differentiation *in vitro*. J. Cell Sci. 113: 1355-1364.
- Middendorp, S., et al. 2000. A role for Centrin-3 in centrosome reproduction. J. Cell Biol. 148: 405-416.
- Araki, M., et al. 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.
- 7. Rice, L.M., et al. 2002. Centriole duplication: centrin in on answers? Curr. Biol. 12: R618-R619.
- Salisbury, J.L., et al. 2002. Centrin-2 is required for centriole duplication in mammalian cells. Curr. Biol. 12: 1287-1292.
- Matei, E., et al. 2003. C-terminal half of human Centrin-2 behaves like a regulatory EF-hand domain. Biochemistry 42: 1439-1450.

# CHROMOSOMAL LOCATION

Genetic locus: CETN3 (human) mapping to 5q14.3; Cetn3 (mouse) mapping to 13 C3.

# SOURCE

Centrin-3 (H-47) is a rabbit polyclonal antibody raised against amino acids 56-102 mapping within an internal region of Centrin-3 of human origin.

# PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

#### APPLICATIONS

Centrin-3 (H-47) is recommended for detection of Centrin-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

Centrin-3 (H-47) is also recommended for detection of Centrin-3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Centrin-3 siRNA (h): sc-60361, Centrin-3 siRNA (m): sc-60362, Centrin-3 shRNA Plasmid (h): sc-60361-SH, Centrin-3 shRNA Plasmid (m): sc-60362-SH, Centrin-3 shRNA (h) Lentiviral Particles: sc-60361-V and Centrin-3 shRNA (m) Lentiviral Particles: sc-60362-V.

Molecular Weight of Centrin-3: 20 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 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 goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> 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.

# **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.

# MONOS Satisfation Guaranteed

Try Centrin-3 (E-6): sc-365697 or Centrin-3 (SS12): sc-100933, our highly recommended monoclonal alternatives to Centrin-3 (H-47).