

Centrin-3 (N-12): sc-46852

BACKGROUND

The EF-hand type Ca^{2+} -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

1. LeDizet, M., et al. 1998. Differential regulation of centrin genes during ciliogenesis in human tracheal epithelial cells. *Am. J. Physiol.* 275: L1145-L1156.
2. Wolfrum, U., et al. 1998. Expression of centrin isoforms in the mammalian retina. *Exp. Cell Res.* 242: 10-17.
3. Durussel, I., et al. 2000. Cation- and peptide-binding properties of human centrin-2. *FEBS Lett.* 472: 208-212.
4. 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.
5. Rice, L.M., et al. 2002. Centriole duplication: centrin in on answers? *Curr. Biol.* 2002 12: R618-R619.
6. Salisbury, J.L., et al. 2002. Centrin-2 is required for centriole duplication in mammalian cells. *Curr. Biol.* 12: 1287-1292.
7. 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 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Centrin-3 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-46852 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Centrin-3 (N-12) 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 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-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.

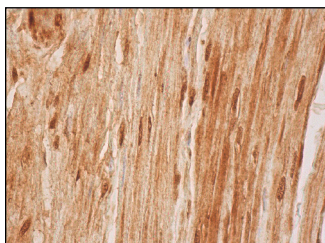
Molecular Weight of Centrin-3: 20 kDa.

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 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



Centrin-3 (N-12): sc-46852. Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing nuclear and cytoplasmic staining of smooth muscle cells.

RESEARCH USE

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

MONOS
Satisfaction
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Try **Centrin-3 (E-6): sc-365697** or **Centrin-3 (SS12): sc-100933**, our highly recommended monoclonal alternatives to Centrin-3 (N-12).