

Centrin-2 (3F8): sc-293192

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

1. LeDizet, M., et al. 1998. Differential regulation of centrin genes during ciliogenesis in human trachealepithelial 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.* 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: CETN2 (human) mapping to Xq28; Cetn2 (mouse) mapping to X A7.3.

SOURCE

Centrin-2 (3F8) is a mouse monoclonal antibody raised against amino acids 85-172 of Centrin-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

Centrin-2 (3F8) 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

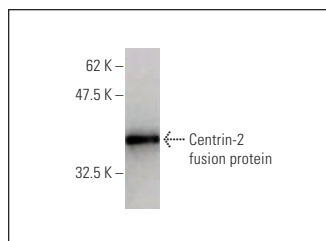
Suitable for use as control antibody for Centrin-2 siRNA (h): sc-43681, Centrin-2 siRNA (m): sc-72106, Centrin-2 shRNA Plasmid (h): sc-43681-SH, Centrin-2 shRNA Plasmid (m): sc-72106-SH, Centrin-2 shRNA (h) Lentiviral Particles: sc-43681-V and Centrin-2 shRNA (m) Lentiviral Particles: sc-72106-V.

Molecular Weight of Centrin-2: 20 kDa.

RECOMMENDED 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).

DATA



Centrin-2 (3F8): sc-293192. Western blot analysis of human recombinant Centrin-2 fusion protein.

SELECT PRODUCT CITATIONS

1. Morris, E.J., et al. 2017. Stat3 regulates centrosome clustering in cancer cells via Stathmin/PLK1. *Nat. Commun.* 8: 15289.

PROTOCOLS

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