

Centrin-1/2 (H-40): sc-50452

BACKGROUND

EF-hand type Ca²⁺-binding proteins consists of several family 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 non-differentiated, 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.

CHROMOSOMAL LOCATION

Genetic locus: CENT1 (human) mapping to 18p11.32, CETN2 (human) mapping to Xq28; Cent1 (mouse) mapping to 18 A1, Ctn2 (mouse) mapping to X A7.3.

SOURCE

Centrin-1/2 (H-40) is a rabbit polyclonal antibody raised against amino acids 93-132 mapping within an internal region 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.

APPLICATIONS

Centrin-1/2 (H-40) is recommended for detection of Centrin-1 and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with other Centrins.

Centrin-1/2 (H-40) is also recommended for detection of Centrin-1 and Centrin-2 in additional species, including equine, canine, bovine, porcine and avian.

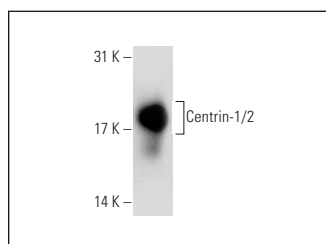
Molecular Weight of Centrin-1/2: 20 kDa.

Positive Controls: mouse testis extract: sc-2405.

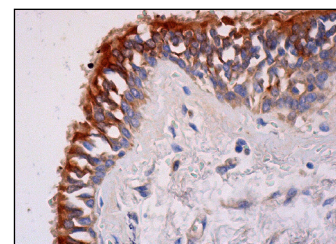
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Centrin-1/2 (H-40): sc-50452. Western blot analysis of Centrin-1/2 expression in mouse testis tissue extract.



Centrin-1/2 (H-40): sc-50452. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

1. Wang, H.F., et al. 2011. BRCA2 and nucleophosmin coregulate centrosome amplification and form a complex with the Rho effector kinase ROCK2. *Cancer Res.* 71: 68-77.

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
Satisfaction
Guaranteed

Try **Centrin-1 (2A6): sc-293494** or **Centrin-2 (3F8): sc-293192**, our highly recommended monoclonal alternatives to Centrin-1/2 (H-40).