

C-Nap1 (S-15): sc-74352

BACKGROUND

C-Nap1 (centrosome-associated protein), also known as centrosomal Nek2-associated protein 1 or CEP2 (centrosomal protein 2), is localized to the cytoplasm and exists in every human cell. C-Nap1 is expressed as 3 isoforms and is a 2,442 amino acid protein. C-Nap1 is a centrosomal protein found at the tips of parental centrioles and in basal bodies of cellular projections, such as cilia. C-Nap1 is associated with the interphase stage of the cell cycle, during which C-Nap1 functions in the cohesion of centrioles. The phosphorylation of C-Nap1 plays a role in regulating whether the centrosomes are associating or dissociating. Nek2 phosphorylates the C-terminal end of C-Nap1 during mitosis, an event which is thought to play a role in the dissociation of centrosomes. C-Nap1 reaccumulates in centrosomes at the end of cellular division. Some autoimmune diseases are characterized by the production of antibodies against C-Nap1, suggesting that C-Nap1 may be involved in the pathogenesis of autoimmune diseases.

REFERENCES

1. Fry, A.M., et al. 1998. C-Nap1, a novel centrosomal coiled-coil protein and candidate substrate of the cell cycle-regulated protein kinase Nek2. *J. Cell Biol.* 141: 1563-1574.
2. Mayor, T., et al. 2000. The centrosomal protein C-Nap1 is required for cell cycle-regulated centrosome cohesion. *J. Cell Biol.* 151: 837-846.
3. Mayor, T., et al. 2002. The mechanism regulating the dissociation of the centrosomal protein C-Nap1 from mitotic spindle poles. *J. Cell Sci.* 115: 3275-3284.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609689. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Yang, J., et al. 2006. Rootletin interacts with C-Nap1 and may function as a physical linker between the pair of centrioles/basal bodies in cells. *Mol. Biol. Cell* 17: 1033-1040.
6. Graser, S., et al. 2007. CEP68 and CEP215 (Cdk5 Rap 2) are required for centrosome cohesion. *J. Cell Sci.* 120: 4321-4331.
7. Kim, K., et al. 2008. A novel function of CEP135 as a platform protein of C-Nap1 for its centriolar localization. *Exp. Cell Res.* 314: 3692-3700.

CHROMOSOMAL LOCATION

Genetic locus: CEP250 (human) mapping to 20q11.22; Cep250 (mouse) mapping to 2 H1.

SOURCE

C-Nap1 (S-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of C-Nap1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-74352 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

C-Nap1 (S-15) is recommended for detection of C-Nap1 of mouse 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).

C-Nap1 (S-15) is also recommended for detection of C-Nap1 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for C-Nap1 siRNA (h): sc-72669, C-Nap1 siRNA (m): sc-72670, C-Nap1 shRNA Plasmid (h): sc-72669-SH, C-Nap1 shRNA Plasmid (m): sc-72670-SH, C-Nap1 shRNA (h) Lentiviral Particles: sc-72669-V and C-Nap1 shRNA (m) Lentiviral Particles: sc-72670-V.

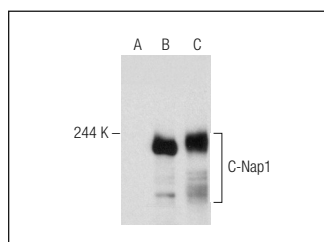
Molecular Weight of C-Nap1: 250 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Ramos cell lysate: sc-2216 or C-Nap1 (h): 293T Lysate: sc-372175.

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.

DATA



C-Nap1 (S-15): sc-74352. Western blot analysis of C-Nap1 expression in non-transfected 293T: sc-117752 (A), human C-Nap1 transfected 293T: sc-372175 (B) and Ramos (C) whole cell lysates.

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.