SANTA CRUZ BIOTECHNOLOGY, INC.

C-Nap1 (F-7): sc-390540

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 three 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 cillia. 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 reacumulates 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.

CHROMOSOMAL LOCATION

Genetic locus: CEP250 (human) mapping to 20q11.22.

SOURCE

C-Nap1 (F-7) is a mouse monoclonal antibody raised against amino acids 107-286 mapping near the N-terminus of C-Nap1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

C-Nap1 (F-7) is available conjugated to agarose (sc-390540 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390540 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390540 PE), fluorescein (sc-390540 FITC), Alexa Fluor® 488 (sc-390540 AF488), Alexa Fluor® 546 (sc-390540 AF546), Alexa Fluor® 594 (sc-390540 AF594) or Alexa Fluor® 647 (sc-390540 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390540 AF680) or Alexa Fluor® 790 (sc-390540 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

C-Nap1 (F-7) is recommended for detection of C-Nap1 of human origin by Western Blotting (starting dilution 1:100, 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 C-Nap1 siRNA (h): sc-72669, C-Nap1 shRNA Plasmid (h): sc-72669-SH and C-Nap1 shRNA (h) Lentiviral Particles: sc-72669-V.

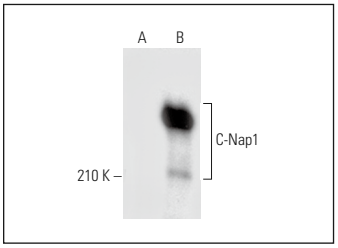
Molecular Weight of C-Nap1: 250 kDa.

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

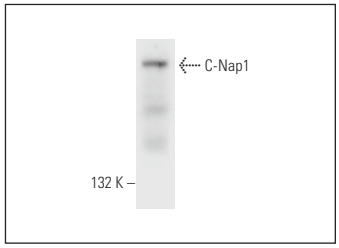
STORAGE

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

DATA



C-Nap1 (F-7): sc-390540. Western blot analysis of C-Nap1 expression in non-transfected: sc-117752 (**A**) and human C-Nap1 transfected: sc-372175 (**B**) 293T whole cell lysates.



C-Nap1 (F-7): sc-390540. Western blot analysis of C-Nap1 expression in Ramos whole cell lysate.

SELECT PRODUCT CITATIONS

1. Khateb, S., et al. 2014. A homozygous nonsense CEP250 mutation combined with a heterozygous nonsense C2orf71 mutation is associated with atypical Usher syndrome. J. Med. Genet. 51: 460-469.
2. Decarreau, J., et al. 2017. The tetrameric kinesin Kif25 suppresses pre-mitotic centrosome separation to establish proper spindle orientation. Nat. Cell Biol. 19: 384-390.
3. Hsu, W.H., et al. 2018. Adducin-1 is essential for spindle pole integrity through its interaction with TPX2. EMBO Rep. 19: e45607.
4. Wang, T., et al. 2019. CCDC84 acetylation oscillation regulates centrosome duplication by modulating HsSAS-6 degradation. Cell Rep. 29: 2078-2091.e5.
5. Hossain, D., et al. 2020. Cep44 functions in centrosome cohesion by stabilizing rootletin. J. Cell Sci. 133: jcs239616.
6. Floriot, S., et al. 2021. CEP250 is required for maintaining centrosome cohesion in the germline and fertility in male mice. Front. Cell Dev. Biol. 9: 754054.
7. Chu, Z. and Gruss, O.J. 2022. Mitotic maturation compensates for premature centrosome splitting and PCM loss in human cep135 knockout cells. Cells 11: 1189.
8. Shen, X.L., et al. 2022. LUBAC regulates ciliogenesis by promoting CP110 removal from the mother centriole. J. Cell Biol. 221: e202105092.
9. Huang, F., et al. 2022. Cartwheel disassembly regulated by CDK1-cyclin B kinase allows human centriole disengagement and licensing. J. Biol. Chem. 298: 102658.
10. Song, C., et al. 2023. The phosphorylation of PHF5A by TrkA-ERK1/2-ABL1 cascade regulates centrosome separation. Cell Death Dis. 14: 98.

RESEARCH USE

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