SANTA CRUZ BIOTECHNOLOGY, INC.

hCAP-H (H-6): sc-101013

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

hCAP-H, also known as NCAPH (non-SMC condensin I complex subunit H), BRRN, BRRN1 or CAPH, is a widely expressed 741 amino acid member of the CND2 (condensin subunit 2) family. Localized to the cytoplasm and the nucleus during interphase and to the nucleus during the rest of mitosis, hCAP-H is a regulatory subunit of the condensin complex, a multi-protein structure that converts interphase chromatin into condense chromosomes. The condensin complex is thought to induce positive supercoils into relaxed DNA and may also convert nicked DNA into knotted forms that can properly condense. hCAP-H, as well as other subunits of the condensin complex, are subject to phosphorylation by Cdc2 (cell division cycle 2). This phosphorylation activates the condensin complex and is, therefore, required for chromosome condensation.

REFERENCES

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3. Cabello, O.A., et al. 1997. Localization of BRRN1, the human homologue of *Drosophila* barr, to 2q11.2. Genomics 46: 311-313.
4. Kimura, K., et al. 2001. Chromosome condensation by a human condensin complex in *Xenopus* egg extracts. J. Biol. Chem. 276: 5417-5420.
5. Cabello, O.A., et al. 2001. Cell cycle-dependent expression and nucleolar localization of hCAP-H. Mol. Biol. Cell 12: 3527-3537.
6. Aono, N., et al. 2002. Cnd2 has dual roles in mitotic condensation and interphase. Nature 417: 197-202.
7. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602332. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
8. Heale, J.T., et al. 2006. Condensin I interacts with the PARP-1-XRCC1 complex and functions in DNA single-strand break repair. Mol. Cell 21: 837-848.
9. Nousiainen, M., et al. 2006. Phosphoproteome analysis of the human mitotic spindle. Proc. Natl. Acad. Sci. USA 103: 5391-5396.

CHROMOSOMAL LOCATION

Genetic locus: NCAPH (human) mapping to 2q11.2.

SOURCE

hCAP-H (H-6) is a mouse monoclonal antibody raised against recombinant hCAP-H of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

hCAP-H (H-6) is recommended for detection of hCAP-H of 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 hCAP-H siRNA (h): sc-62445, hCAP-H shRNA Plasmid (h): sc-62445-SH and hCAP-H shRNA (h) Lentiviral Particles: sc-62445-V.

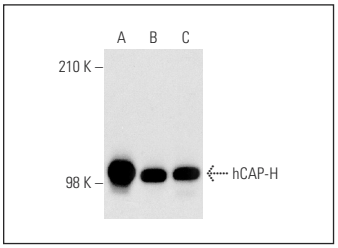
Molecular Weight of hCAP-H: 97 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, MOLT-4 nuclear extract: sc-2151 or MEG-01 nuclear extract: sc-2150.

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



hCAP-H (H-6): sc-101013. Western blot analysis of hCAP-H expression in MOLT-4 (**A**), K-562 (**B**) and MEG-01 (**C**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Asai, Y., et al. 2020. SET/TAF1 forms a distance-dependent feedback loop with Aurora B and Bub1 as a tension sensor at centromeres. Sci. Rep. 10: 15653.

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 for detailed protocols and support products.