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NCAPH2 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1973A

Product Information

Application	WB, E
Primary Accession	Q6IBW4
Other Accession	Q9BUT3
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	68227
Antigen Region	198-227

Additional Information

Gene ID	29781
Other Names	Condensin-2 complex subunit H2, Chromosome-associated protein H2, hCAP-H2, Kleisin-beta, Non-SMC condensin II complex subunit H2, NCAPH2, CAPH2
Target/Specificity	This NCAPH2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 198-227 amino acids from the N-terminal region of human NCAPH2.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NCAPH2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NCAPH2
Synonyms	CAPH2
Function	Regulatory subunit of the condensin-2 complex, a complex that seems to

	provide chromosomes with an additional level of organization and rigidity and in establishing mitotic chromosome architecture (PubMed:14532007). May promote the resolution of double-strand DNA catenanes (intertwines) between sister chromatids. Condensin-mediated compaction likely increases tension in catenated sister chromatids, providing directionality for type II topoisomerase-mediated strand exchanges toward chromatid decatenation. Required for decatenation of chromatin bridges at anaphase. Early in neurogenesis, may play an essential role to ensure accurate mitotic chromosome condensation in neuron stem cells, ultimately affecting neuron pool and cortex size (By similarity). Seems to have lineage-specific role in T-cell development (PubMed:14532007).
Cellular Location	Nucleus. Chromosome. Note=Distributed along the arms of chromosomes assembled in vivo and in vitro

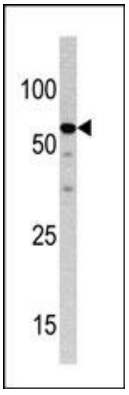
Background

Structural maintenance of chromosomes (SMC) and non-SMC condensin proteins associate into complexes that have been implicated in the process of chromosome condensation. A crucial prerequisite for accurate segregation of replicated sister chromatids is the condensation of the chromosomes into a manageable form prior to metaphase. The condensin I complex consists of two SMC subunits, SMC2 and SMC4, and three non-SMC subunits, CAP-H, CAP-G, and CAP-D2. An alternative complex, the condensin II complex, contains alternate non-SMC subunits, CAP-G2, CAP-H2, and CAP-D3. CAP-H2 is also known as Non-SMC condensin II complex, subunit H2 (NCAPH2) or kleisin beta isoform 2. The three non-SMC subunits in the condensing complexes form a regulatory subcomplex that is required to activate the SMC ATPases and to promote mitosis-specific chromatin binding of the holocomplex. The precise individual functions of each non-SMC protein in activation remain to be determined.

References

Ono,T., et al. Cell 115 (1), 109-121 (2003).
Schleiffer,A., et al. Mol. Cell 11 (3), 571-575 (2003).
Loftus, B.J., et al., Genomics 60(3):295-308 (1999).

Images



Western blot analysis of anti-NCAPH2 Pab (Cat. #AP1973a) in HepG2 cell line lysate (35ug/lane). NCAPH2(arrow) was detected using the purified Pab.

Citations

- Detection of condensin I and II in maturing pig oocytes.
- Caspase-3-mediated degradation of condensin Cap-H regulates mitotic cell death.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.