

hCAP-G (T-20): sc-54828

BACKGROUND

hCAP-G (condensin complex subunit 3, condensin subunit CAP-G) is a 1,015 amino acid protein that is encoded by the human gene NCAPG. hCAP-G belongs to the CND3 (condensin subunit 3) family and contains ten HEAT repeats. hCAP-G is a regulatory subunit of the condensin complex, a complex required for conversion of interphase chromatin into mitotic-like condensed chromosomes. The condensin complex probably introduces positive supercoils into relaxed DNA in the presence of type I topoisomerases and converts nicked DNA into positive knotted forms in the presence of type II topoisomerases. In interphase cells, the majority of the condensin complex is found in the cytoplasm, while a minority of the complex is associated with chromatin. A subpopulation of the complex, however, remains associated with chromosome foci in interphase cells. During mitosis, most of the condensin complex is associated with the chromatin. At the onset of prophase, the regulatory subunits of the complex are phosphorylated by CDC2, leading to association of condensin with chromosome arms and to chromosome condensation. Dissociation from chromosomes is observed in late telophase.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: NCAPG (human) mapping to 4p15.31.

SOURCE

hCAP-G (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of hCAP-G of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-54828 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

hCAP-G (T-20) is recommended for detection of hCAP-G of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

hCAP-G (T-20) is also recommended for detection of hCAP-G in additional species, including equine and bovine.

Suitable for use as control antibody for hCAP-G siRNA (h): sc-62443, hCAP-G shRNA Plasmid (h): sc-62443-SH and hCAP-G shRNA (h) Lentiviral Particles: sc-62443-V.

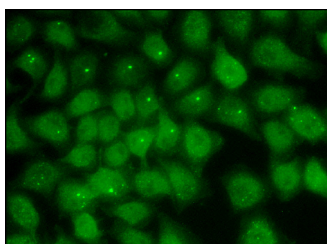
Molecular Weight of hCAP-G: 114 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



hCAP-G (T-20). sc-54828. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear and cytoplasmic localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School.

RESEARCH USE

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