

# INCENP (K-20): sc-47896

## BACKGROUND

A replicated chromosome includes two kinetochores that control chromosome segregation during mitosis. The centromere proteins CENP-A, CENP-B, CENP-C, CENP-E, CENP-F (also designated mitotin), CENP-H and INCENP are kinetochore proteins that are involved in mitotic events. The centromere proteins are expressed at different levels throughout the cell cycle and are involved in the formation of the centromere and the organization and function of the kinetochore. INCENP, which also is designated inner centromere protein, is a chromosomal passenger protein that is crucial for chromosome segregation. During mitosis it is also required for cytokinesis onset. This protein, which can form a homodimer or a heterodimer, binds directly to microtubules and interacts with AURKB, AURKC, CBX3 and  $\beta$ -tubulin. This nuclear protein localizes to the mitotic spindle, metaphase chromosomes and during anaphase, to the equatorial cortex.

## REFERENCES

1. Ainsztein, A.M., et al. 1998. INCENP centromere and spindle targeting: identification of essential conserved motifs and involvement of heterochromatin protein HP1. *J. Cell Biol.* 143: 1763-1774.
2. Wheatley, S.P., et al. 2001. INCENP binds directly to tubulin and requires dynamic microtubules to target to the cleavage furrow. *Exp. Cell Res.* 262: 122-127.
3. Li, X., et al. 2004. Direct association with inner centromere protein (INCENP) activates the novel chromosomal passenger protein, Aurora-C. *J. Biol. Chem.* 279: 47201-47211.
4. Vernos, I., et al. 2004. The chromosomal passenger complex takes center stage during mitosis. *Dev. Cell* 7: 145-146.
5. Sessa, F., et al. 2005. Mechanism of Aurora-B activation by INCENP and inhibition by hesperadin. *Mol. Cell* 18: 379-391.
6. Zhu, C., et al. 2005. Recruitment of MKLP1 to the spindle midzone/midbody by INCENP is essential for midbody formation and completion of cytokinesis in human cells. *Biochem. J.* 389: 373-381.
7. Nousiainen, M., et al. 2006. Phosphoproteome analysis of the human mitotic spindle. *Proc. Natl. Acad. Sci. USA* 103: 5391-5396.

## CHROMOSOMAL LOCATION

Genetic locus: INCENP (human) mapping to 11q12.3; Incenp (mouse) mapping to 19 A.

## SOURCE

INCENP (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of INCENP of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47895 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

INCENP (K-20) is recommended for detection of INCENP of mouse and 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).

INCENP (K-20) is also recommended for detection of INCENP in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for INCENP siRNA (h): sc-60848, INCENP siRNA (m): sc-60849, INCENP shRNA Plasmid (h): sc-60848-SH, INCENP shRNA Plasmid (m): sc-60849-SH, INCENP shRNA (h) Lentiviral Particles: sc-60848-V and INCENP shRNA (m) Lentiviral Particles: sc-60849-V.

Molecular Weight of INCENP: 120 kDa.

Positive Controls: mouse prostate extract: sc-364249.

## 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **INCENP (B-4): sc-376514**, our highly recommended monoclonal alternative to INCENP (K-20).