

HEI-C (K-18): sc-84842

BACKGROUND

Mitosis is an important process regulated by many proteins. In the event that cellular division is not controlled, cancer, tumors and cellular death become prevalent. HEI-C (enhancer of invasion-cluster) is also known as CCDC5 (coiled-coil domain containing 5 (spindle associated)) and is a 278 amino acid protein expressed as 2 isoforms. HEI-C is expressed in a variety of tissues including pancreas, kidney, skeletal muscle, liver and heart, where it is localized to the cytoplasm during phases of the cell cycle, excluding mitosis. HEI-C is localized to asters, and is spotted on the microtubule array during metaphase. During the later stages of mitosis, HEI-C remains only on the spindle, then associates with microtubule bundles central to the midbody of the cell. During the meta-phase-anaphase transition of mitosis, HEI-C regulates the function and stability of the mitotic spindle. Depletion of HEI-C results in cell death or mitotic delay between metaphase and anaphase, suggesting the importance of functional HEI-C proteins.

REFERENCES

1. Einarson, M.B., Cukierman, E., Compton, D.A. and Golemis, E.A. 2004. Human enhancer of invasion-cluster, a coiled-coil protein required for passage through mitosis. *Mol. Cell. Biol.* 24: 3957-3971.
2. Moore, A. and Wordeman, L. 2004. The mechanism, function and regulation of depolymerizing kinesins during mitosis. *Trends Cell Biol.* 14: 537-546.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608775. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Suzuki, H., Akiyama, N., Tsuji, M., Ohashi, T., Saito, S. and Eto, Y. 2006. Human Shugoshin mediates kinetochore-driven formation of kinetochore microtubules. *Cell Cycle* 5: 1094-1101.
5. Leisner, C., Kammerer, D., Denoth, A., Britschi, M., Barral, Y. and Liakopoulos, D. 2008. Regulation of mitotic spindle asymmetry by SUMO and the spindle-assembly checkpoint in yeast. *Curr. Biol.* 18: 1249-1255.

CHROMOSOMAL LOCATION

Genetic locus: HAUS1 (human) mapping to 18q21.1; Haus1 (mouse) mapping to 18 E3.

SOURCE

HEI-C (K-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of HEI-C of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84842 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

HEI-C (K-18) is recommended for detection of HEI-C of mouse, rat and 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)], 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).

HEI-C (K-18) is also recommended for detection of HEI-C in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HEI-C siRNA (h): sc-75237, HEI-C siRNA (m): sc-145932, HEI-C shRNA Plasmid (h): sc-75237-SH, HEI-C shRNA Plasmid (m): sc-145932-SH, HEI-C shRNA (h) Lentiviral Particles: sc-75237-V and HEI-C shRNA (m) Lentiviral Particles: sc-145932-V.

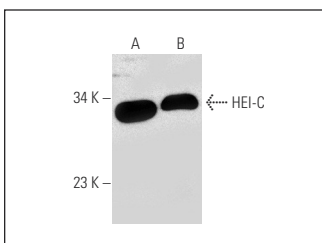
Molecular Weight of HEI-C: 32 kDa.

Positive Controls: LADMAC whole cell lysate: sc-364189 or mouse lymph node extract: sc-364243.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



HEI-C (K-18): sc-84842. Western blot analysis of HEI-C expression in LADMAC whole cell lysate (A) and mouse lymph node tissue extract (B).

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.