

HEI-C (E-17): sc-84841

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 metaphase-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., et al. 2004. Human enhancer of invasion-cluster, a coiled-coil protein required for passage through mitosis. *Mol. Cell. Biol.* 24: 3957-3971.
2. Moore, A., et al. 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., et al. 2006. Human Shugoshin mediates kinetochore-driven formation of kinetochore microtubules. *Cell Cycle* 5: 1094-1101.
5. Leisner, C., et al. 2008. Regulation of mitotic spindle asymmetry by SUMO and the spindle-assembly checkpoint in yeast. *Curr. Biol.* 18: 1249-1255.
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CHROMOSOMAL LOCATION

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

SOURCE

HEI-C (E-17) 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-84841 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

HEI-C (E-17) 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 (E-17) 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.

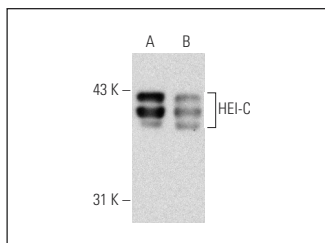
Molecular Weight of HEI-C: 32 kDa.

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

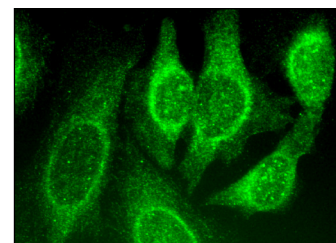
RECOMMENDED SECONDARY REAGENTS

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 (E-17): sc-84841. Western blot analysis of HEI-C expression in 293T whole cell lysate (A) and mouse lymph node tissue extract (B).



HEI-C (E-17): sc-84841. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

STORAGE

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

PROTOCOLS

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