SANTA CRUZ BIOTECHNOLOGY, INC.

Haspin (A-20): sc-46000

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Haspins (haploid germ cell-specific nuclear protein kinase) constitute a protein family containing a distinctive C-terminal kinase domain and a divergent N-terminus. Haspin homologs occur within a diverse group of eukaryotes, including animals, plants and fungi, which suggests an early evolutionary origin. Haspin, a nuclear protein strongly expressed in male germ cells, is responsible for the phosphorylation of Histone H3 at Thr-3. Depletion of Haspin RNA prevents normal alignment of chromosomes at metaphase, suggesting a crucial role for haspin during chromosome segregation. Expression of haspin also occurs in adult thymus and bone marrow, with weaker expression in adult prostate, intestine, lung, spleen and lymph node. The gene encoding human Haspin maps to chromosome 17p13.

REFERENCES

1. Tanaka, H., et al. 1999. Identification and characterization of a haploid germ cell-specific nuclear protein kinase (Haspin) in spermatid nuclei and its effects on somatic cells. J. Biol. Chem. 274: 17049-17057.
2. Yoshimura, Y., et al. 2001. Nested genomic structure of haploid germ cell specific haspin gene. Gene 267: 49-54.
3. Higgins, J.M., et al. 2001. The Haspin gene: location in an intron of the integrin αE gene, associated transcription of an integrin αE-derived RNA and expression in diploid as well as haploid cells. Gene 267: 55-69.
4. Higgins, J.M., et al. 2001. Haspin-like proteins: a new family of evolutionarily conserved putative eukaryotic protein kinases. Protein Sci. 10: 1677-1684.
5. Tanaka, H., et al. 2001. Cloning and characterization of human haspin gene encoding haploid germ cell-specific nuclear protein kinase. Mol. Hum. Reprod. 7: 211-218.
6. Higgins, J.M., et al. 2003. Structure, function and evolution of haspin and haspin-related proteins, a distinctive group of eukaryotic protein kinases. Cell. Mol. Life Sci. 60: 446-462.
7. Dai, J., et al. 2005. The kinase haspin is required for mitotic Histone H3 Thr 3 phosphorylation and normal metaphase chromosome alignment. Genes Dev. 19: 472-488.
8. Dai, J., et al. 2005. Haspin: a mitotic histone kinase required for metaphase chromosome alignment. Cell Cycle 4: 665-668.

CHROMOSOMAL LOCATION

Genetic locus: Gsg2 (mouse) mapping to 11 B4.

SOURCE

Haspin (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Haspin of mouse origin.

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-46000 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Haspin (A-20) is recommended for detection of Haspin of mouse and rat 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).

Suitable for use as control antibody for Haspin siRNA (m): sc-45798, Haspin shRNA Plasmid (m): sc-45798-SH and Haspin shRNA (m) Lentiviral Particles: sc-45798-V.

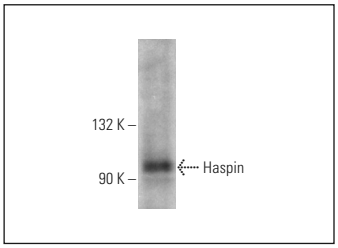
Molecular Weight of Haspin: 83 kDa.

Positive Controls: mouse testis extract: sc-2405, mouse thymus extract: sc-2406 or rat testis extract: sc-2400.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



Haspin (A-20): sc-46000. Western blot analysis of Haspin expression in mouse thymus tissue extract.

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 or our catalog for detailed protocols and support products.