SANTA CRUZ BIOTECHNOLOGY, INC.

HEAB (T-17): sc-243005

BACKGROUND

HEAB, also known as CLP1 (CLP1, cleavage and polyadenylation factor I subunit, homolog *(S. cerevisiae))* or polyribonucleotide 5'-hydroxyl-kinase Clp1, is a 425 amino acid nuclear protein that belongs to the Clp1 family. Utilizing magnesium, manganese or nickel as cofactors, HEAB participates in the phosphorylation of the 5'-hydroxyl groups of double- and single- stranded RNA and DNA. HEAB is a member of the tRNA splicing endonuclease complex, in conjunction with TSEN2, TSEN15, TSEN34 and TSEN54, and is also a member of the pre-mRNA cleavage complex II. The gene encoding HEAB maps to human chromosome 11q12.1 and mouse chromosome 2 D; mutations to this gene may lead to a reduced pre-mRNA cleavage activity. HEAB exists as two isoforms due to alternative splicing events.

REFERENCES

1. Tanabe, S., et al. 1996. AF10 is split by MLL and HEAB, a human homolog to a putative *Caenorhabditis elegans* ATP/GTP-binding protein in an invins(10;11)(p12;q23q12). Blood 88: 3535-3545.
2. de Vries, H., et al. 2000. Human pre-mRNA cleavage factor II(m) contains homologs of yeast proteins and bridges two other cleavage factors. EMBO J. 19: 5895-5904.
3. Paushkin, S.V., et al. 2004. Identification of a human endonuclease complex reveals a link between tRNA splicing and pre-mRNA 3' end formation. Cell 117: 311-321.
4. Weitzer, S., et al. 2007. The human RNA kinase hClp1 is active on 3' transfer RNA exons and short interfering RNAs. Nature 447: 222-226.
5. Ramirez, A., et al. 2008. Human RNA 5'-kinase (hClp1) can function as a tRNA splicing enzyme *in vivo*. RNA 14: 1737-1745.

CHROMOSOMAL LOCATION

Genetic locus: CLP1 (human) mapping to 11q12.1; Clp1 (mouse) mapping to 2 D.

SOURCE

HEAB (T-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HEAB of human 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-243005 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.

PROTOCOLS

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

APPLICATIONS

HEAB (T-17) is recommended for detection of HEAB 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).

HEAB (T-17) is also recommended for detection of HEAB in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for HEAB siRNA (h): sc-96740, HEAB siRNA (m): sc-145918, HEAB shRNA Plasmid (h): sc-96740-SH, HEAB shRNA Plasmid (m): sc-145918-SH, HEAB shRNA (h) Lentiviral Particles: sc-96740-V and HEAB shRNA (m) Lentiviral Particles: sc-145918-V.

Molecular Weight of HEAB isoform 1: 48 kDa.

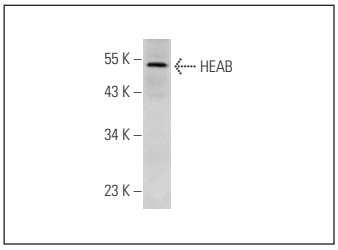
Molecular Weight of HEAB isoform 2: 41 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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



HEAB (T-17): sc-243005. Western blot analysis of HEAB expression in Hep G2 whole cell lysate.

RESEARCH USE

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