

DcpS (m): 293T Lysate: sc-119688

BACKGROUND

Eukaryotic cells primarily utilize exoribonucleases and decapping enzymes to degrade their mRNA. DcpS is a scavenger pyrophosphatase that hydrolyzes the residual cap structure following 3' to 5' decay of an mRNA. Following mRNA degradation DcpS releases N-7 methyl guanosine monophosphate and 5'-diphosphate terminated cap or mRNA products. The central histidine within the DcpS HIT motif is critical for decapping activity and defines the HIT motif as a new mRNA decapping domain, making DcpS the first member of the HIT family of proteins with a defined biological function. HIT proteins are homodimeric and contain two conserved 100-amino-acid HIT fold domains with independent active sites that are each sufficient to bind and hydrolyze cognate substrates.

REFERENCES

1. Fireman, P. 1992. Diagnosis of sinusitis in children: emphasis on the history and physical examination. *J. Allergy Clin. Immunol.* 90: 433-436.
2. Wang, Z. and Kiledjian, M. 2001. Functional link between the mammalian exosome and mRNA decapping. *Cell* 107: 751-762.
3. Liu, H., et al. 2002. The scavenger mRNA decapping enzyme DcpS is a member of the HIT family of pyrophosphatases. *EMBO J.* 21: 4699-4708.
4. Wang, Z., et al. 2002. The hDcp2 protein is a mammalian mRNA decapping enzyme. *Proc. Natl. Acad. Sci. USA* 99: 12663-12668.
5. Gu, M., et al. 2004. Insights into the structure, mechanism, and regulation of scavenger mRNA decapping activity. *Mol. Cell* 14: 67-80.

CHROMOSOMAL LOCATION

Genetic locus: Dcps (mouse) mapping to 9 A4.

PRODUCT

DcpS (m): 293T Lysate represents a lysate of mouse DcpS transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

DcpS (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive DcpS antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

DcpS (A-12): sc-393226 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse DcpS expression in DcpS transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

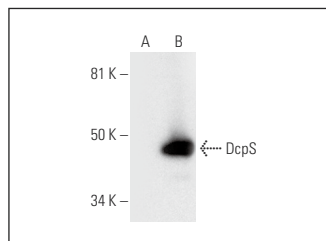
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

DATA



DcpS (A-12): sc-393226. Western blot analysis of DcpS expression in non-transfected: sc-117752 (A) and mouse DcpS transfected: sc-119688 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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