SANTA CRUZ BIOTECHNOLOGY, INC.

DHH1 (yE-18): sc-51481

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The Power to Question

BACKGROUND

The *Drosophila* segment polarity gene, hedgehog (hh), encodes a precursor protein which undergoes autocleavage to generate amino- and carboxy-terminal peptides. Both proteins are secreted and appear to function in embryonic and imaginal disc patterning. Several vertebrate homologs of *Drosophila* hh have been identified. These include Sonic hedgehog (Shh) (alternatively designated Vhh-1), Desert hedgehog (Dhh) and Indian hedgehog (Ihh). Each contain amino-terminal signal peptides and are thought to function as secreted proteins involved in the mediation of various cell-cell interactions. DHH1 is the *Saccharomyces cerevisiae* homolog of the human Dhh protein. Localized to cytoplasmic P bodies, DHH1 is an ATP-dependent RNA helicase that is involved in mRNA decapping and DNA-damage checkpoint recovery. DHH1 contains one helicase ATP-binding domain and one helicase C-terminal domain and is required for proper sporulation.

REFERENCES

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3. Fischer, N. and Weis, K. 2002. The DEAD box protein DHH1 stimulates the decapping enzyme Dcp1. EMBO J. 21: 2788-2797.
4. Sheth, U. and Parker, R. 2003. Decapping and decay of messenger RNA occur in cytoplasmic processing bodies. Science 300: 805-808.
5. Tseng-Rogenski, S.S., Chong, J.L., Thomas, C.B., Enomoto, S., Berman, J. and Chang, T.H. 2003. Functional conservation of Dhh1p, a cytoplasmic DExD/H-box protein present in large complexes. Nucleic Acids Res. 31: 4995-5002.
6. Bergkessel, M. and Reese, J.C. 2004. An essential role for the *Saccharomyces cerevisiae* DEAD-box helicase DHH1 in G_1/S DNA-damage checkpoint recovery. Genetics 167: 21-33.
7. Cheng, Z., Coller, J., Parker, R. and Song, H. 2005. Crystal structure and functional analysis of DEAD-box protein Dhh1p. RNA 11: 1258-1270.
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SOURCE

DHH1 (yE-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DHH1 of yeast origin.

STORAGE

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

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-51481 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DHH1 (yE-18) is recommended for detection of DHH1 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of DHH1: 58 kDa.

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.

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.