# BCDIN3 (m): 293T Lysate: sc-118775



The Power to Question

### **BACKGROUND**

BCDIN3 (bicoid-interacting protein 3), also known as MEPCE (methylphosphate capping enzyme), is a 689 amino acid protein that contains one BIN3 domain and belongs to the methyltransferase superfamily. Expressed in lung, brain, kidney, testis, mammary gland and cerebellum, BCDIN3 exists as a component of the multi-protein 7SK snRNP complex and functions as an S-adenosyl-L-methionine-dependent methyltransferase that stabilizes 7SK snRNA, specifically by adding a methylphosphate cap at the 5'-end of the snRNA. In addition to its expression in normal tissues, BCDIN3 is also present in chronic myeloid leukemia cells, suggesting a role in tumor progression and metastasis. The gene encoding BCDIN3 maps to human chromosome 7q22.1, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to Osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

# **REFERENCES**

- 1. Rogers, S.A., Bowen, D.J., Ling, M., Thomson, P., Wang, Z. and Lim, S.H. 2002. Identification and characterization of a novel gene encoding a SEREX antigen in chronic myeloid leukaemia. Br. J. Haematol. 119: 112-114.
- Jeronimo, C., Forget, D., Bouchard, A., Li, Q., Chua, G., Poitras, C., Therien, C., Bergeron, D., Bourassa, S., Greenblatt, J., Chabot, B., Poirier, G.G., Hughes, T.R., Blanchette, M., Price, D.H. and Coulombe, B. 2007. Systematic analysis of the protein interaction network for the human transcription machinery reveals the identity of the 7SK capping enzyme. Mol. Cell. 27: 262-274.
- Kaneko, S., Chu, C., Shatkin, A.J. and Manley, J.L. 2007. Human capping enzyme promotes formation of transcriptional R loops in vitro. Proc. Natl. Acad. Sci. USA 104: 17620-17625.
- 4. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611478. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 5. Krueger, B.J., Jeronimo, C., Roy, B.B., Bouchard, A., Barrandon, C., Byers, S.A., Searcey, C.E., Cooper, J.J., Bensaude, O., Cohen, E.A., Coulombe, B. and Price, D.H. 2008. LARP7 is a stable component of the 7SK snRNP while P-TEFb, HEXIM1 and hnRNP A1 are reversibly associated. Nucleic Acids Res. 36: 2219-2229.

## CHROMOSOMAL LOCATION

Genetic locus: Mepce (mouse) mapping to 5 G2.

# **PRODUCT**

BCDIN3 (m): 293T Lysate represents a lysate of mouse BCDIN3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

#### **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.

## **RESEARCH USE**

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

#### **APPLICATIONS**

BCDIN3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive BCDIN3 antibodies. Recommended use: 10-20  $\mu$ l per lane

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

## **PROTOCOLS**

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

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