



MELK (h): 293T Lysate: sc-110053

BACKGROUND

Maternal embryonic leucine zipper kinase (KIAA0175, HPK38) or MELK, a new member of the Snf1/AMPK family of kinases, encodes a protein with a kinase catalytic domain and a leucine zipper motif consisting of a periodic repetition of leucine residues at every seventh residue located within the N-terminal catalytic domain. This motif has been observed in myriad DNA-binding proteins and is presumed to be involved in protein-DNA interactions, and potentially protein-protein interactions. Research predicts that the gene product of MELK plays a role in the signal transduction events in the egg and early embryo. Mouse and human MELK proteins share 95% sequence identity in the kinase domain and northern blot analysis in mouse indicates that MELK expression is restricted to spermatogonia in the testis and to oocytes in the ovary.

REFERENCES

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3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607025. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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5. Vulsteke, V., et al. 2004. Inhibition of spliceosome assembly by the cell cycle-regulated protein kinase MELK and involvement of splicing factor NIPP1. *J. Biol. Chem.* 279: 8642-8647.
6. Beullens, M., et al. 2005. Substrate specificity and activity regulation of protein kinase MELK. *J. Biol. Chem.* 280: 40003-40011.
7. Nakano, I., et al. 2005. Maternal embryonic leucine zipper kinase (MELK) regulates multipotent neural progenitor proliferation. *J. Cell Biol.* 170: 413-427.
8. Badouel, C., et al. 2006. M-phase MELK activity is regulated by MPF and MAPK. *Cell Cycle* 5: 883-889.
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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.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: MELK (human) mapping to 9p13.2.

PRODUCT

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

APPLICATIONS

MELK (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive MELK 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.

RESEARCH USE

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