

MELK (2G2B7): sc-517201

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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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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CHROMOSOMAL LOCATION

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

SOURCE

MELK (2G2B7) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 637-651 (C-VYKRLVEDILSSCKV) of MELK of human origin.

PRODUCT

Each vial contains 50 µg IgG_{2a} kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MELK (2G2B7) is recommended for detection of MELK of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MELK siRNA (h): sc-61016, MELK shRNA Plasmid (h): sc-61016-SH and MELK shRNA (h) Lentiviral Particles: sc-61016-V.

Molecular Weight of MELK: 73 kDa.

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. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 3) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

STORAGE

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

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.