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MELK Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1724a

Product Information

Application	IHC, FC, ICC, E
Primary Accession	Q14680
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	2G2
Isotype	IgG2a
Calculated MW	74642
Description	Maternal embryonic leucine-zipper kinase (MELK) is a key regulator of survival of stemlike GBM cells in vitro. MELK expression is increased in breast cancer tissue and this increase is also associated with poor patient survival, as predicted for a candidate oncogene.
Immunogen	Synthesized peptide of human MELK(AA: 637-651:C-VYKRLVEDILSSCKV).
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	9833
Other Names	Maternal embryonic leucine zipper kinase, hMELK, 2.7.11.1, Protein kinase Eg3, pEg3 kinase, Protein kinase PK38, hPK38, Tyrosine-protein kinase MELK, 2.7.10.2, MELK, KIAA0175
Dilution	IHC~~1/500 - 1/2000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MELK Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MELK
Synonyms	KIAA0175

Function	Serine/threonine-protein kinase involved in various processes such as cell cycle regulation, self-renewal of stem cells, apoptosis and splicing regulation. Has a broad substrate specificity; phosphorylates BCL2L14, CDC25B, MAP3K5/ASK1 and ZNF622. Acts as an activator of apoptosis by phosphorylating and activating MAP3K5/ASK1. Acts as a regulator of cell cycle, notably by mediating phosphorylation of CDC25B, promoting localization of CDC25B to the centrosome and the spindle poles during mitosis. Plays a key role in cell proliferation and carcinogenesis. Required for proliferation of embryonic and postnatal multipotent neural progenitors. Phosphorylates and inhibits BCL2L14, possibly leading to affect mammary carcinogenesis by mediating inhibition of the pro-apoptotic function of BCL2L14. Also involved in the inhibition of spliceosome assembly during mitosis by phosphorylating ZNF622, thereby contributing to its redirection to the nucleus. May also play a role in primitive hematopoiesis.
Cellular Location	Cell membrane; Peripheral membrane protein
Tissue Location	Expressed in placenta, kidney, thymus, testis, ovary and intestine.

References

1. Neuro Oncol. 2011 Jun;13(6):622-34. 2. Breast Cancer Res. 2009;11(4):R60.

Images

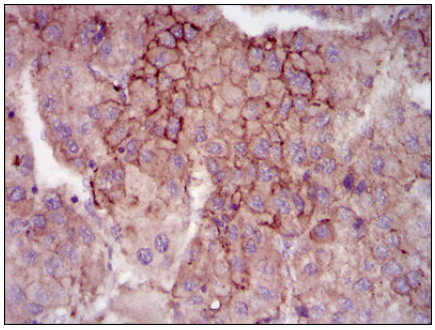

Figure 1: Immunohistochemical analysis of paraffin-embedded liver cancer tissues using MELK mouse mAb with DAB staining.

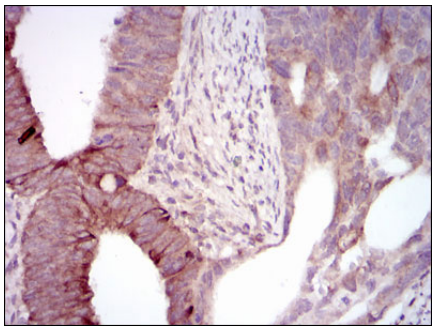

Figure 2: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using MELK mouse mAb with DAB staining.

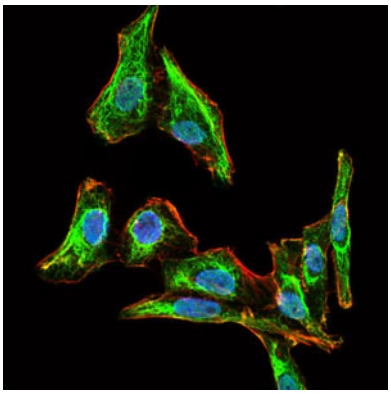

Figure 3: Immunofluorescence analysis of HepG2 cells using MELK mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

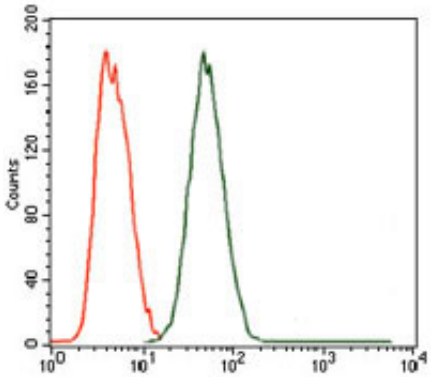

Figure 4: Flow cytometric analysis of MCF-7 cells using MELK mouse mAb (green) and negative control (red).