

MELK Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1724a**Specification****MELK Antibody - Product Information**

Application	E, IHC, IF, FC
Primary Accession	Q14680
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Calculated MW	74.6kDa KDa

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

MELK Antibody - 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

E~~1/10000
IHC~~1/500 - 1/2000
IF~~1/200 - 1/1000
FC~~1/200 - 1/400

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.

MELK Antibody - 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

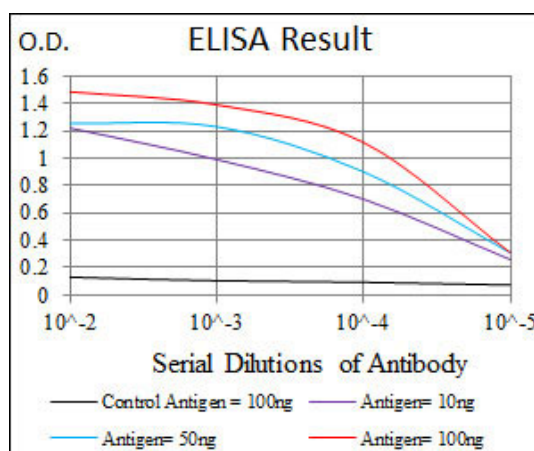
Tissue Location

Expressed in placenta, kidney, thymus, testis, ovary and intestine.

MELK Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)



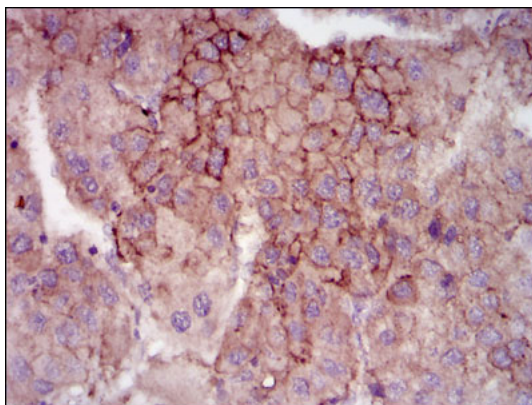


Figure 1: Immunohistochemical analysis of paraffin-embedded liver cancer tissues using MELK mouse mAb with DAB staining.

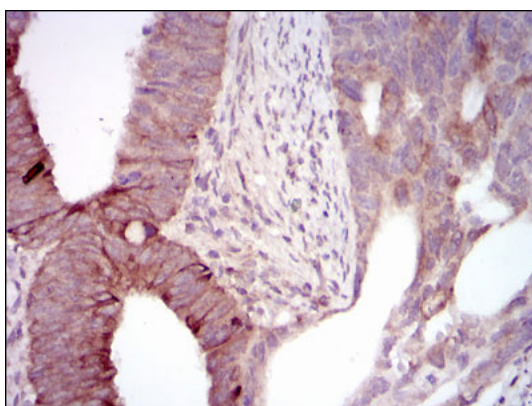


Figure 2: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using MELK mouse mAb with DAB staining.

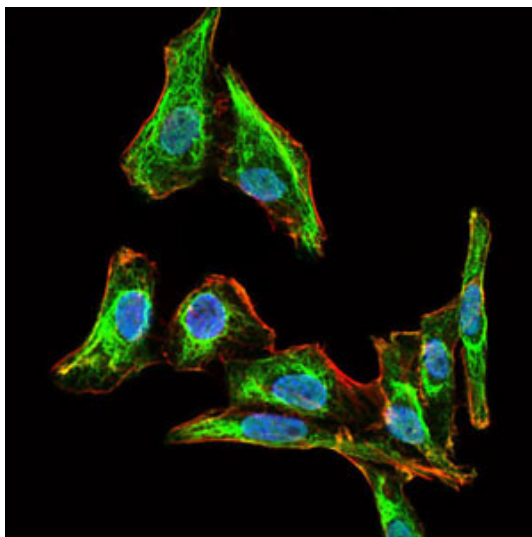


Figure 3: Immunofluorescence analysis of HepG2 cells using MELK mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

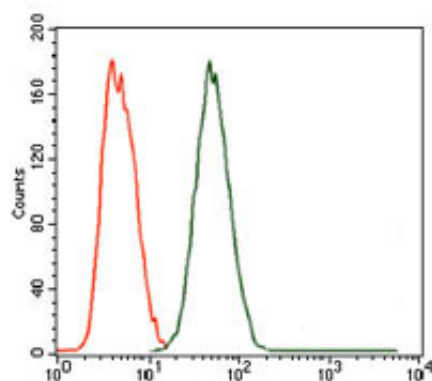


Figure 4: Flow cytometric analysis of MCF-7 cells using MELK mouse mAb (green) and negative control (red).

MELK Antibody - References

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