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Anti-MELK Antibody

Catalog # AP60077

Product Information

Application	WB, IHC, IF/IC
Primary Accession	Q14680
Reactivity	Human, Mouse, Rat, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	74642

Additional Information

Gene ID	9833
Other Names	KIAA0175; Maternal embryonic leucine zipper kinase; hMELK; Protein kinase Eg3; pEg3 kinase; Protein kinase PK38; hPK38; Tyrosine-protein kinase MELK
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human MELK. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500) IHC~~WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

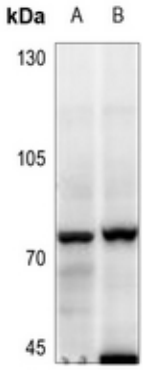
Name	MELK
Synonyms	KIAA0175
Function	Serine/threonine-protein kinase involved in various processes such as cell cycle regulation, self-renewal of stem cells, apoptosis and splicing regulation. Has a broad substrate specificity; phosphorylates BCL2L14, CDC25B, MAP3K5/ASK1 and ZNF622. Acts as an activator 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.

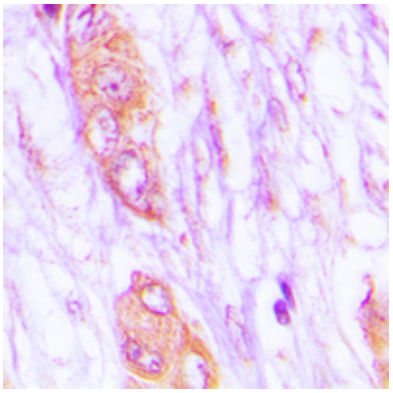
Cellular Location Cell membrane; Peripheral membrane protein

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

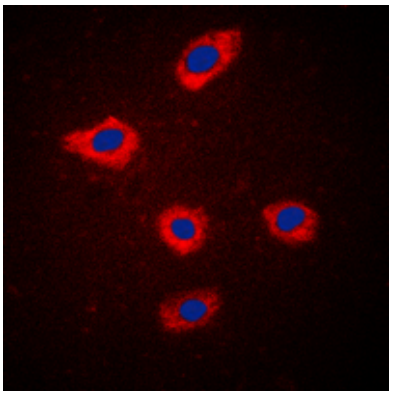
Images



Western blot analysis of MELK expression in Hela (A), C6 (B) whole cell lysates. (Predicted band size: 52; 59; 66; 69; 70; 71; 74 kD; Observed band size: 74 kD)

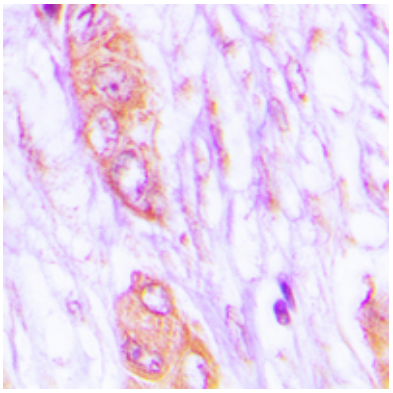


Immunohistochemical analysis of MELK staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of MELK staining in MCF7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

Immunohistochemical analysis of MELK staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



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