MELK Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	MELK, Polyclonal Antibody
Full Product Name	MELK (Maternal Embryonic Leucine Zipper Kinase, hMELK, HPK38, KIAA0175, pEg3 Kinase, Protein Kinase PK38, RP11-8N6.1) (MaxLight 750)
Product Gene Name	anti-MELK antibody
Product Synonym Names	EC=2.7.11.1; OTTHUMP00000046113
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight750.
Purity/Purification	Purified by Protein G Affinity Chromatography.
Specificity	Recognizes human MELK.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight750 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	75kDa
OMIM	607025
3D Structure	ModBase 3D Structure for Q14680
Immunogen	Synthetic peptide selected from the center region of human MELK (KLH).
Conjugate	MaxLight750
Note	Preservative Free
Product Categories/Family for anti-MELK antibody	Antibodies; Protein Kinases
Applications Tested/Suitable for anti-MELK antibody	Western Blot (WB), FLISA
Application Notes for anti-MELK antibody	WB: 1:100-1:500 FLISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-MELK antibody	MBS6487732 is an antibody targeting MELK. Also known as MELK (Maternal Embryonic Leucine Zipper Kinase, hMELK, HPK38, KIAA0175, pEg3 Kinase, Protein Kinase PK38, RP11-8N6.1) (MaxLight 750). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-MELK antibody	1. Davezac, N., et al., Oncogene 21(50):7630-7641 (2002). 2. Heyer, B.S., et al., Mol. Reprod. Dev. 47(2):148-156 (1997).
Other Notes	Small volumes of anti-MELK antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MELK. It may not necessarily be applicable to this product.

NCBI GI #	375493532
NCBI GeneID	9833
NCBI Accession #	NP_055606
UniProt Primary Accession #	Q14680
UniProt Related Accession #	Q14680
GenBank Nucleotide #	NM_014791
NCBI Official Full Name	maternal embryonic leucine zipper kinase isoform 2
NCBI Official Synonym Full Names	maternal embryonic leucine zipper kinase
NCBI Official Symbol	MELK
NCBI Official Synonym Symbols	HPK38
UniProt Protein Name	Maternal embryonic leucine zipper kinase
UniProt Synonym Protein Names	Protein kinase Eg3; pEg3 kinase; Protein kinase PK38; hPK38; Tyrosine-protein kinase MELK
Protein Family	Maternal embryonic leucine zipper kinase
UniProt Gene Name	MELK
UniProt Synonym Gene Names	KIAA0175; hMELK; pEg3 kinase; hPK38
UniProt Entry Name	MELK_HUMAN
NCBI Protein Information	maternal embryonic leucine zipper kinase

UniProt Comments for MELK	MELK: 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. Monomer. Interacts with ZNF622 and PPP1R8. Up-regulated in many cancers cells. Up-regulated upon treatment with radiation or 5-fluorouracil (5-FU) in colorectal cancer cells, suggesting that it might be associated with increased resistance of colorectal cells against radiation and 5- FU. Down-regulated upon siomycin A, a thiazole antibiotic, treatment, leading to inhibit tumor growth in vivo. Expressed in placenta, kidney, thymus, testis, ovary and intestine. Activated by autophosphorylation of the T-loop at Thr-167 and Ser-171: in contrast to other members of the SNF1 subfamily, phosphorylation at Thr-167 is not mediated by STK11/LKB1 but via autophosphorylation instead. Inhibited by calcium-binding. Kinase activity is also regulated by reducing agents: dithiothreitol (DTT) or reduced glutathione are required for kinase activity in vitro; such dependence is however not due to the presence of disulfide bonds. Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. SNF1 subfamily. Protein type: Kinase, protein; EC 2.7.10.2; EC 2.7.11.1; RNA splicing; Protein kinase, Ser/Thr (non-receptor); Protein kinase, CAMK; CAMK group; CAMKL family; MELK subfamily Chromosomal Location of Human Ortholog: 9p13.2 Cellular Component: membrane; plasma membrane; cell cortex Molecular Function: protein serine/threonine kinase activity; protein binding; non-membrane spanning protein tyrosine kinase activity; calcium ion binding; lipid binding; ATP binding Biological Process: cell proliferation; peptidyl-tyrosine phosphorylation; apoptosis; positive regulation of apoptosis; protein amino acid autophosphorylation; hemopoiesis; G2/M transition of mitotic cell cycle; induction of apoptosis by oxidative stress
Research Articles on MELK	**1.** data suggest that MELK is a modulator of tumor cell growth and survival in a hypoxic microenvironment in adrenal cancer cells and support future investigation of its role as a therapeutic kinase target in patients with Adrenocortical Carcinoma.
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