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(Mouse) Melk Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21213b

Product Information

Application	WB, FC, E
Primary Accession	Q61846
Reactivity	Mouse
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB51204
Calculated MW	72729

Additional Information

Gene ID	17279
Other Names	Maternal embryonic leucine zipper kinase, Protein kinase PK38, mPK38, Tyrosine-protein kinase MELK, Melk, Kiaa0175, Pk38
Target/Specificity	This mouse Melk antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 434-468 amino acids from the C-terminal region of mouse Melk.
Dilution	WB~~1:2000 FC~~1:25 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	(Mouse) Melk Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Melk
Synonyms	Kiaa0175, Pk38
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. Required for proliferation of embryonic and postnatal multipotent neural progenitors. Phosphorylates and inhibits 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 testis, ovary, thymus, spleen and T- cell. Expressed by neural progenitors: highly enriched in cultures containing multipotent progenitors.

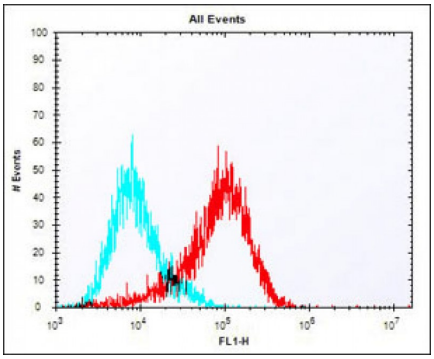
Background

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. Required for proliferation of embryonic and postnatal multipotent neural progenitors. Phosphorylates and inhibits 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.

References

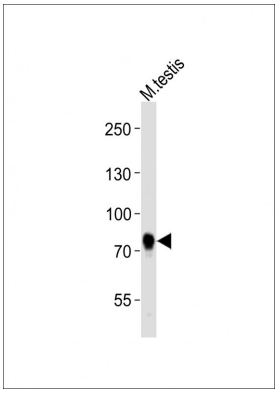
Gil M.,et al.Gene 195:295-301(1997).
Heyer B.S.,et al.Mol. Reprod. Dev. 47:148-156(1997).
Carninci P.,et al.Science 309:1559-1563(2005).
Okazaki N.,et al.DNA Res. 10:167-180(2003).
Church D.M.,et al.PLoS Biol. 7:E1000112-E1000112(2009).

Images



Overlay histogram showing MCF-7 cells stained with AP21213b (red line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP21213b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit lgG (H+L) (1583138) at 1/400 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

Anti-Melk Antibody (C-term) at 1:1000 dilution + mouse testis lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 73 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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