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Mouse Monoclonal Antibody to BUB1

Purified Mouse Monoclonal Antibody
Catalog # AO2419a

Product Information

Application	WB, FC, E
Primary Accession	O43683
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1A11C7
Isotype	Mouse IgG1
Calculated MW	122375
Description	This gene encodes a serine/threonine-protein kinase that play a central role in mitosis. The encoded protein functions in part by phosphorylating members of the mitotic checkpoint complex and activating the spindle checkpoint. This protein also plays a role in inhibiting the activation of the anaphase promoting complex/cyclosome. This protein may also function in the DNA damage response. Mutations in this gene have been associated with aneuploidy and several forms of cancer. Alternate splicing results in multiple transcript variants.;
Immunogen	Purified recombinant fragment of human BUB1 (AA: 1-130) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide
Application Note	ELISA: 1/10000; WB: 1/500 - 1/2000; FCM: 1/200 - 1/400

Additional Information

Gene ID	699
Other Names	BUB1A; BUB1L; Hbub1
Dilution	WB~~1:1000 FC~~1:10~50 E~~N/A
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	Mouse Monoclonal Antibody to BUB1 is for research use only and not for use in diagnostic or therapeutic procedures.

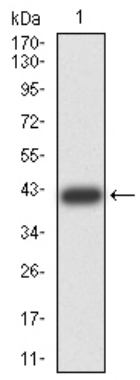
Protein Information

Name	BUB1 (HGNC:1148)
Synonyms	BUB1L
Function	Serine/threonine-protein kinase that performs 2 crucial functions during mitosis: it is essential for spindle-assembly checkpoint signaling and for correct chromosome alignment. Has a key role in the assembly of checkpoint proteins at the kinetochore, being required for the subsequent localization of CENPF, BUB1B, CENPE and MAD2L1. Required for the kinetochore localization of PLK1. Required for centromeric enrichment of AUKRB in prometaphase. Plays an important role in defining SGO1 localization and thereby affects sister chromatid cohesion. Promotes the centromeric localization of TOP2A (PubMed:35044816). Acts as a substrate for anaphase-promoting complex or cyclosome (APC/C) in complex with its activator CDH1 (APC/C-Cdh1). Necessary for ensuring proper chromosome segregation and binding to BUB3 is essential for this function. Can regulate chromosome segregation in a kinetochore-independent manner. Can phosphorylate BUB3. The BUB1-BUB3 complex plays a role in the inhibition of APC/C when spindle-assembly checkpoint is activated and inhibits the ubiquitin ligase activity of APC/C by phosphorylating its activator CDC20. This complex can also phosphorylate MAD1L1. Kinase activity is essential for inhibition of APC/CCDC20 and for chromosome alignment but does not play a major role in the spindle-assembly checkpoint activity. Mediates cell death in response to chromosome missegregation and acts to suppress spontaneous tumorigenesis.
Cellular Location	Nucleus. Chromosome, centromere, kinetochore Note=Nuclear in interphase cells. Accumulates gradually during G1 and S phase of the cell cycle, peaks at G2/M, and drops dramatically after mitosis. Localizes to the outer kinetochore. Kinetochore localization is required for normal mitotic timing and checkpoint response to spindle damage and occurs very early in prophase. AURKB, KNL1 and INCENP are required for kinetochore localization
Tissue Location	High expression in testis and thymus, less in colon, spleen, lung and small intestine. Expressed in fetal thymus, bone marrow, heart, liver, spleen and thymus. Expression is associated with cells/tissues with a high mitotic index

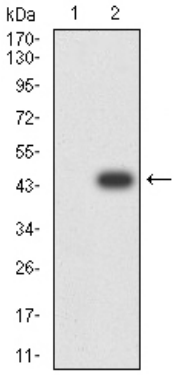
References

1.Sci Signal. 2015 Jan 6;8(358):ra1. ; 2.Horm Cancer. 2013 Apr;4(2):92-102.;

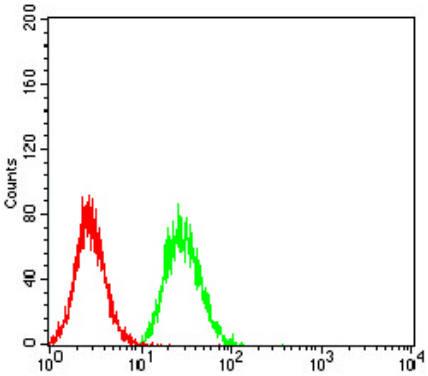
Images



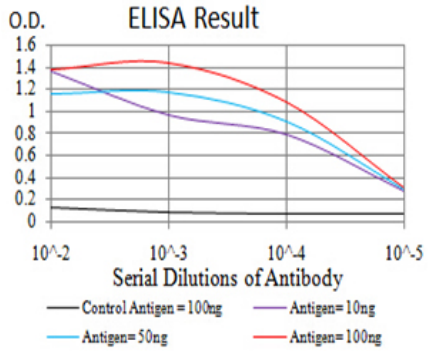
Western blot analysis using BUB1 mAb against human BUB1 (AA: 1-130) recombinant protein. (Expected MW is 41.3 kDa)



Western blot analysis using BUB1 mAb against HEK293 (1) and BUB1 (AA: 1-130)-hIgGFc transfected HEK293 (2) cell lysate.



Flow cytometric analysis of Hela cells using BUB1 mouse mAb (green) and negative control (red).



Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng),

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.