

Mouse Monoclonal Antibody to BUB1
Purified Mouse Monoclonal Antibody
Catalog # AO2419a**Specification**

Mouse Monoclonal Antibody to BUB1 - Product Information

Application	WB, FC, E
Primary Accession	O43683
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Calculated MW	122.4kDa KDa

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

Mouse Monoclonal Antibody to BUB1 - Additional Information

Gene ID 699

Other Names

BUB1A; BUB1L; Hbub1

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.

Mouse Monoclonal Antibody to BUB1 - Protein Information

Name BUB1**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 (By similarity)

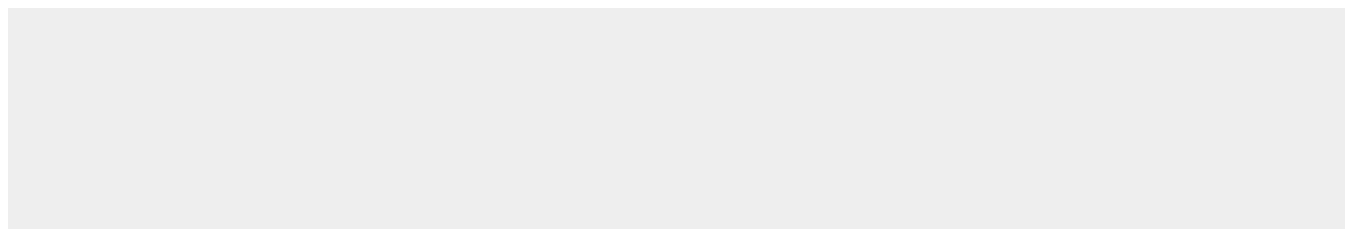
Tissue Location

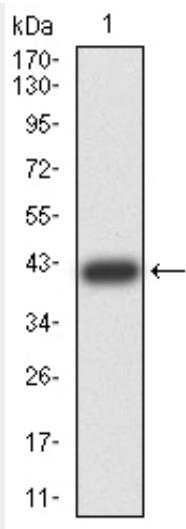
High expression in testis and thymus, less in colon, spleen, lung and small intestine. Expressed in fetal thymus, bone marrow, heart, liver, spleen and thymus. Expression is associated with cells/tissues with a high mitotic index

Mouse Monoclonal Antibody to BUB1 - Protocols

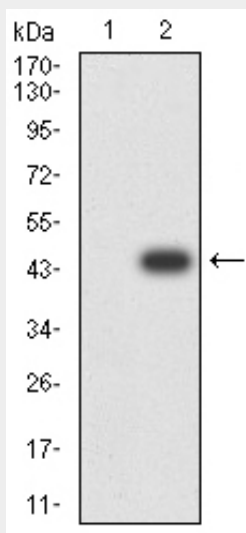
Provided below are standard protocols that you may find useful for product applications.

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

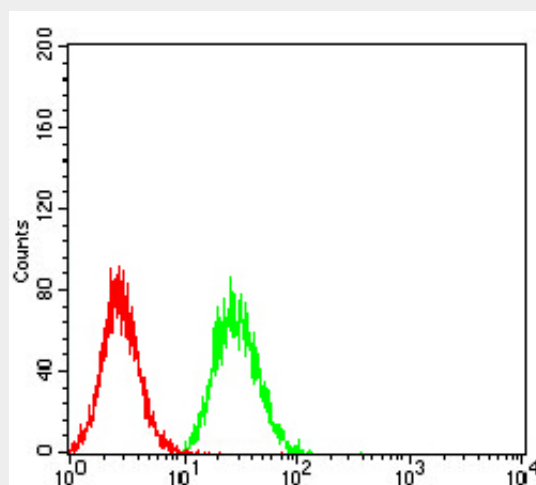
Mouse Monoclonal Antibody to BUB1 - Images



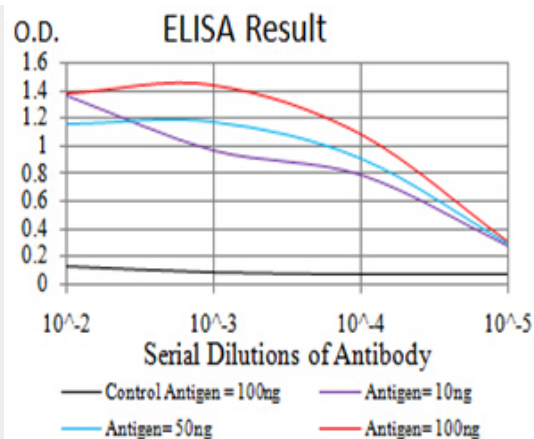
Western blot analysis using BUB1 mAb against human BUB1 (AA: 1-130) recombinant protein. (Expected MW is 41.3 kDa)



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),

Mouse Monoclonal Antibody to BUB1 - References

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