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Anti-BUB1 (MOUSE) Monoclonal Antibody
BUB1 Antibody
Catalog # ASR4165

Specification

Anti-BUB1 (MOUSE) Monoclonal Antibody - Product Information

Host	**Mouse**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Monoclonal**
Application	**WB, E, IP, I, LCI**
Application Note	**This protein A purified antibody has been tested for use in immunoprecipitation, immunofluorescence staining and western blot and is capable of detecting endogenous protein. Specific conditions for reactivity should be optimized by the end user. Expect a predominant band at ~ 160 kDa corresponding to full-length protein by western blotting in the appropriate cell lysate or extract. The use of HeLa whole cell lysates prepared using a RIPA buffer is recommended as a positive control. For IF microscopy use cells grown on cover slips fixed with 3.5% paraformaldehyde in PBS at pH 6.8 OR 100% methanol at -20° C. Permeabilize fixed cells with 0.5% Triton X-100.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**This protein A purified monoclonal antibody was produced by repeated immunizations with a recombinant protein corresponding to amino acid residues 281-419 of human BUB1 protein.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-BUB1 (MOUSE) Monoclonal Antibody - Additional Information

Gene ID 699

Other Names
699

Purity
This Protein A purified antibody is directed against human BUB1 protein. The product was purified from tissue culture supernatant by chromatography. This antibody reacts with BUB1 from human cells. No reactivity is seen for homologues from Xenopus or Kangaroo Rat. Reactivity against

homologues from other sources is not known.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-BUB1 (MOUSE) Monoclonal Antibody - 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

Anti-BUB1 (MOUSE) Monoclonal Antibody - Protocols

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

- Western Blot

- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-BUB1 (MOUSE) Monoclonal Antibody - Images

Anti-BUB1 (MOUSE) Monoclonal Antibody - Background

BUB1 (also called Mitotic checkpoint serine/threonine-protein kinase BUB1and BUB1A) is a kinase involved in spindle checkpoint function. The kinase functions in part by phosphorylating BUB3, a member of the miotic checkpoint complex, and activating the spindle checkpoint. Mutations in this gene have been associated with aneuploidy and several forms of cancer. BUB1 is autophosphorylated when cells enter mitosis. This protein is localized to the nucleus in interphase cells. Kinetochore localization is required for normal mitotic timing and checkpoint response to spindle damage. BUB1 is highly expressed in testis and thymus, less in colon, spleen, lung and small intestine. Expression is associated with cells/tissues with a high mitotic index.