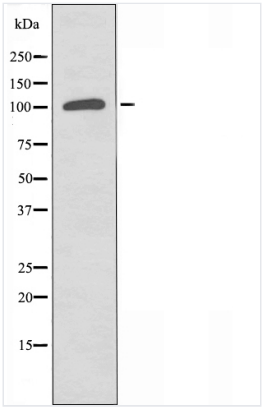
BUB1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	BUB1, Polyclonal Antibody
Full Product Name	BUB1 Antibody
Product Gene Name	anti-BUB1 antibody
Product Synonym Names	Bub1; BUB1 budding uninhibited by benzimidazoles 1 homolog; BUB1 budding uninhibited by benzimidazoles 1 homolog (yeast); BUB1 mitotic checkpoint serine/threonine kinase; BUB1, S. cerevisiae, homolog of; BUB1_HUMAN; BUB1A; BUB1L; Budding uninhibited by benzimidazoles 1 (yeast homolog); Budding uninhibited by benzimidazoles 1 homolog; Budding uninhibited by benzimidazoles 1, S. cerevisiae, homolog of; hBUB1; Homolog of mitotic checkpoint gene BUB1; Mitotic checkpoint gene BUB1; Mitotic checkpoint serine/threonine protein kinase BUB1; Mitotic checkpoint serine/threonine-protein kinase BUB1; Mitotic spindle checkpoint kinase; Putative serine/threonine protein kinase
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Concentration	1mg/ml (lot specific)
Specificity	BUB1 antibody detects endogenous levels of total BUB1
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.
Antibody/Peptide Pairs	Bub1 peptide (MBS9624944) is used for blocking the activity of Bub1 antibody (MBS9606227)
Molecular Weight	Observed: 120 kD Predicted: 123 kDa
3D Structure	ModBase 3D Structure for O43683
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Immunogen	A synthesized peptide
Subcellular Location	Nucleus. Chromosome > Centromere > Kinetochore. 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, CASC5 and INCENP are required for kinetochore localization.
Tissue Specificity	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.
Conjugation	Unconjugated
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-BUB1 antibody	Western Blot (WB), ELISA (EIA)

Application Notes for anti-BUB1 antibody	WB: 1:500-1:1000
Related Product Information for anti-BUB1 antibody	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. 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. Subunit Structure: Interacts with BUB3 and KNL1. Interacts (when phosphorylated) with PLK1. The BUB1-BUB3 complex interacts with MAD1L1. Interacts with SV40 Large T antigen; this interaction induces activation of a DNA damage response and promotes p53/TP53 stabilization and phosphorylation (Probable). Post-translational Modifications: Upon spindle-assembly checkpoint activation it is hyperphosphorylated and its kinase activity toward CDC20 is stimulated. Phosphorylation at Thr-609 is required for interaction with PLK1, phosphorylation at this site probably creates a binding site for the POLO-box domain of PLK1, thus enhancing the PLK1-BUB1 interaction. Ubiquitinated and degraded during mitotic exit by APC/C-Cdh1. Similarity: The KEN box is required for its ubiquitination and degradation.BUB1 N-terminal domain directs kinetochore localization and binding to BUB3. Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. BUB1 subfamily.
Other Notes	Small volumes of anti-BUB1 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.
Searchable Terms for BUB1 purchase	MBS9606227 is an antibody targeting BUB1. Also known as BUB1 Antibody. Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-BUB1 antibody
Western blot analysis of extracts from COLO205 cells, using BUB1 antibody.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for BUB1. It may not necessarily be applicable to this product.

NCBI GI #	519666801
NCBI GeneID	699
NCBI Accession #	NP_001265546.1
UniProt Primary Accession #	O43683
UniProt Secondary Accession #	O43430; O43643; O60626; Q53QE4; E9PC26; F5GXI5
UniProt Related Accession #	O43683

GenBank Nucleotide #	NM_001278617.1
NCBI Official Full Name	mitotic checkpoint serine/threonine-protein kinase BUB1 isoform 3
NCBI Official Synonym Full Names	BUB1 mitotic checkpoint serine/threonine kinase
NCBI Official Symbol	BUB1
NCBI Official Synonym Symbols	BUB1A; BUB1L; hBUB1
UniProt Protein Name	Mitotic checkpoint serine/threonine-protein kinase BUB1
UniProt Synonym Protein Names	BUB1A
Protein Family	Checkpoint serine/threonine-protein kinase
UniProt Gene Name	BUB1
UniProt Synonym Gene Names	BUB1L; hBUB1
NCBI Protein Information	mitotic checkpoint serine/threonine-protein kinase BUB1
NCBI Summary for BUB1	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. [provided by RefSeq, Jul 2013]
UniProt Comments for BUB1	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. 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.
Research Articles on BUB1	**1.** Small sequence differences in Bub1 and BubR1 direct Bub3 to different phosphorylated targets in the spindle assembly checkpoint signaling cascade.
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