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KD-Validated Anti-BUB1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1354

Product Information

Application	WB
Primary Accession	O43683
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	25GB3065
Calculated MW	122375
Gene Name	BUB1
Aliases	BUB1; BUB1 Mitotic Checkpoint Serine/Threonine Kinase; HBUB1; BUB1A; BUB1L; Mitotic Checkpoint Serine/Threonine-Protein Kinase BUB1; Budding Uninhibited By Benzimidazoles 1 (Yeast Homolog); Budding Uninhibited By Benzimidazoles 1 Homolog (Yeast); BUB1 Budding Uninhibited By Benzimidazoles 1 Homolog; Budding Uninhibited By Benzimidazoles 1 Homolog; Putative Serine/Threonine-Protein Kinase; Mitotic Spindle Checkpoint Kinase; EC 2.7.11.1; MCPH30
Immunogen	A synthesized peptide derived from human Bub1

Additional Information

Gene ID	699
Other Names	Mitotic checkpoint serine/threonine-protein kinase BUB1, hBUB1, 2.7.11.1, BUB1A, BUB1, BUB1L

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

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