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BUB1 (BUB1a) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8058b

Product Information

Application	WB, IHC-P, E
Primary Accession	O43683
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB03123-03124
Calculated MW	122375
Antigen Region	1043-1073

Additional Information

Gene ID	699
Other Names	Mitotic checkpoint serine/threonine-protein kinase BUB1, hBUB1, BUB1A, BUB1, BUB1L
Target/Specificity	This BUB1 (BUB1a) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1043-1073 amino acids from the C-terminal region of human BUB1 (BUB1a).
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	BUB1 (BUB1a) Antibody (C-term) 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

Background

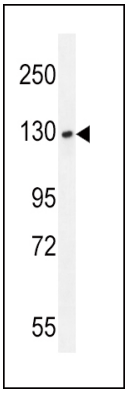
This gene encodes a kinase involved in spindle checkpoint function. The kinase functions in part by phosphorylating a member of the miotic checkpoint complex and activating the spindle checkpoint. Mutations in this gene have been associated with aneuploidy and several forms of cancer.

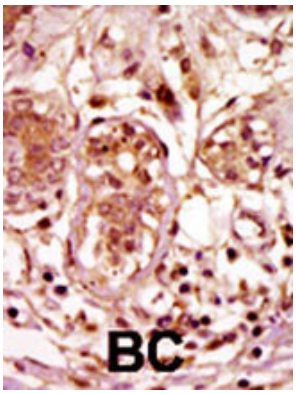
References

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Ru, H.Y., et al., Oncogene 21(30):4673-4679 (2002).
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Images

BUB1A Antibody (F1058) (Cat.#AP8058b) western blot analysis in T47D cell line lysates (35ug/lane).This demonstrates the BUB1A antibody detected the BUB1A protein (arrow).





Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

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