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BUB1 (BUB1a) Antibody (C-term) Blocking peptide

Synthetic peptide
Catalog # BP8058b

Specification

BUB1 (BUB1a) Antibody (C-term) Blocking peptide - Product Information

Primary Accession O43683

BUB1 (BUB1a) Antibody (C-term) Blocking peptide - Additional Information

Gene ID 699

Other Names
Mitotic checkpoint serine/threonine-protein kinase BUB1, hBUB1, BUB1A, BUB1, BUB1L

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8058b was selected from the C-term region of human BUB1A . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

BUB1 (BUB1a) Antibody (C-term) Blocking peptide - 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

BUB1 (BUB1a) Antibody (C-term) Blocking peptide - Protocols

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

- Blocking Peptides

BUB1 (BUB1a) Antibody (C-term) Blocking peptide - Images

BUB1 (BUB1a) Antibody (C-term) Blocking peptide - 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.

BUB1 (BUB1a) Antibody (C-term) Blocking peptide - References

Shichiri, M., et al., Cancer Res. 62(1):13-17 (2002).Cayrol, C., et al., Biochem. Biophys. Res. Commun. 298(5):720-730 (2002).Nakagawa, H., et al., Oncol. Rep. 9(6):1229-1232 (2002).Ru, H.Y., et al., Oncogene 21(30):4673-4679 (2002).Lin, S.F., et al., Leuk. Lymphoma 43(2):385-391 (2002).