

Rabbit anti-Human, Rat Bub1 Polyclonal Antibody | anti-Bub1 antibody

Phospho-Bub1 (Ser459) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA31312	Rabbit	Human, Rat	Immunohistochemistry, Immunofluorescence, Immunocytochemistry, ELISA

PRODUCT SYNONYMS

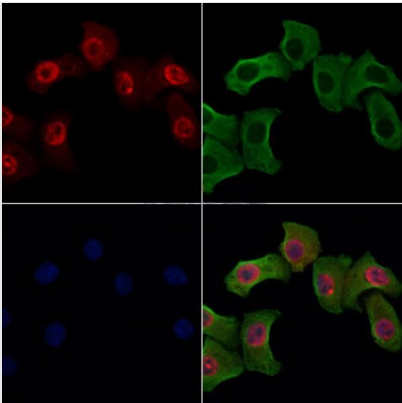
Bub1; Polyclonal Antibody; Phospho-Bub1 (Ser459) Antibody; BUB1 budding uninhibited by benzimidazoles 1 homolog; BUB1 budding uninhibited by benzimidazoles 1 homolog (yeast); BUB1 mitotic checkpoint serine/threonine kinase; BUB1; S. cerevisiae; homolog of; BUB1_HUMAN; BUB1A; BUB1L; Budding uninhibited by benzimidazoles 1 (yeast homolog); Budding uninhibited by benzimidazoles 1 homolog; Budding uninhibited by benzimidazoles 1; 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; anti-Bub1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-Bub1 (Ser459) Antibody detects endogenous levels of Bub1 only when phosphorylated at Ser459. 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.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-Bub1 antibody	IHC (Immunohistochemistry), IF (Immunofluorescence), ICC (Immunocytochemistry), ELISA (Peptide ELISA)
Application Notes	IHC: 1:50-1:200 IF/ICC: 1:100-1:500 Peptide ELISA: 1:20,000-1:40,000
Immunogen	A synthesized peptide derived from human Bub1 around the phosphorylation site of Ser459.
Conjugation	Unconjugated
Fragment	Fab fragment
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.
Subunit Structure	Interacts with BUB3 and KNL1. Interacts (when phosphorylated) with PLK1. The BUB1-BUB3 complex interacts with MAD1L1. (Microbial infection) Interacts with SV40 Large T antigen; this interaction induces activation of a DNA damage response and promotes p53/TP53 stabilization and phosphorylation. (Microbial infection) Interacts with herpes virus 8 protein LANA1.

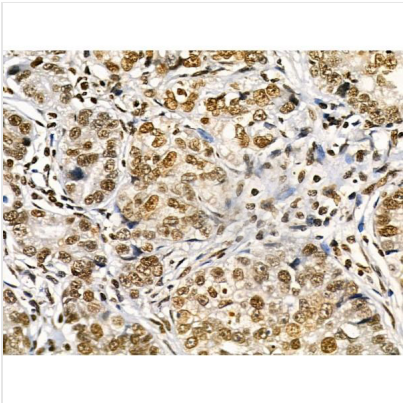
Similarity	The KEN box is required for its ubiquitination and degradation.BUB1 N-terminal domain directs kinetochore localization and binding to BUB3.Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. BUB1 subfamily.
Subcellular Location	Nucleus. Chromosome>Centromere>Kinetochore. 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).
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



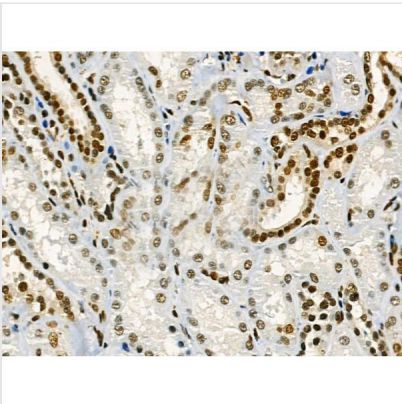
Application Data

At 25 degree C. Samples were then incubated with primary Ab(At 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody.The nuclear counter stain is DAPI (blue).



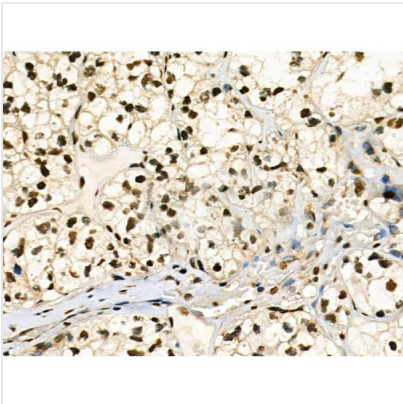
IHC (Immunohistochemistry)

At 1/100 staining Human gastric cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



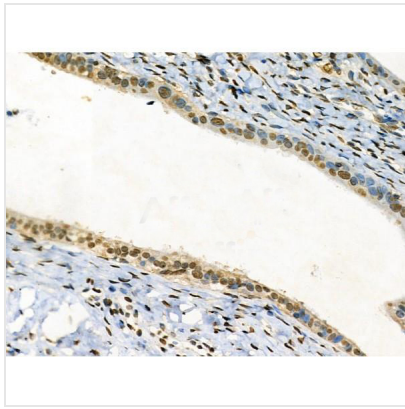
IHC (Immunohistochemistry)

At 1/100 staining Human pancreatic cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



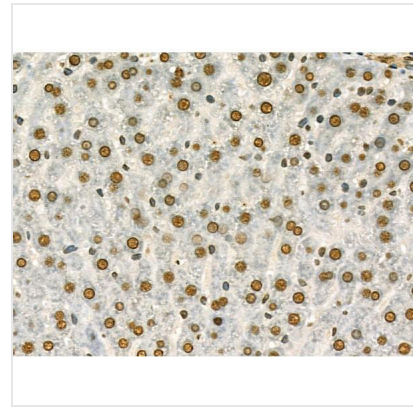
IHC (Immunohistochemistry)

At 1/100 staining Human kidney cancer and adjacent normal tissues by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/100 staining Human ovarian cancer and adjacent normal tissues by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/100 staining Rat heart tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-Bub1 antibody

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.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4757878
NCBI GeneID	699
NCBI Accession #	NP_004327.1
NCBI GenBank Nucleotide #	NM_004336.3
UniProt Accession #	O43683 ; O43430 ; O43643 ; O60626 ; Q53QE4
Molecular Weight	122,375 Da
NCBI Official Full Name	mitotic checkpoint serine/threonine-protein kinase BUB1
NCBI Official Synonym Full Names	BUB1 mitotic checkpoint serine/threonine kinase
NCBI Official Symbol	BUB1
NCBI Official Synonym Symbols	BUB1A; BUB1L; hBUB1
NCBI Protein Information	mitotic checkpoint serine/threonine-protein kinase BUB1; mitotic spindle checkpoint kinase; putative serine/threonine-protein kinase; budding uninhibited by benzimidazoles 1 homolog; BUB1 budding uninhibited by benzimidazoles 1 homolog
UniProt Protein Name	Mitotic checkpoint serine/threonine-protein kinase BUB1
UniProt Gene Name	BUB1

UniProt Synonym Gene Names	BUB1L; hBUB1
UniProt Entry Name	BUB1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/bub1-antibody-immunohistochemistry-immunofluorescence-immunocytochemistry-peptide-elisa-elisa/31312>