🕜 Tel: +1-301-363-4651 🛛 🖂 Email: cusabio@cusabio.com 🥃 Website: www.cusabio.com 🧉

BUB1 Recombinant Monoclonal Antibody

Product Code	CSB-RA281837A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O43683
Immunogen	A synthesized peptide derived from human Bub1
Species Reactivity	Human
Tested Applications	ELISA, WB; Recommended dilution: WB:1:500-1:5000
Relevance	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.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cancer; Cell biology
Gene Names	BUB1
Clone No.	9C11

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🕜 Tel: +1-301-363-4651 🛛 🖾 Email: cusabio@cusabio.com 🤅 Website: www.cusabio.com 🌘

Image



Western Blot Positive WB detected in: Hela whole cell lysate, K562 whole cell lysate, HepG2 whole cell lysate All lanes: Bub1 antibody at 1:1000 Secondary Goat polyclonal to rabbit IgG at 1/50000 dilution Predicted band size: 123, 116, 120 kDa Observed band size: 130 kDa

Description

CUSABIO produces the BUB1 recombinant monoclonal antibody following the four key steps: sequencing the BUB1 monoclonal antibody gene, cloning the gene into a plasmid vector, introducing the recombinant vector into a host cell line, and purifying the BUB1 recombinant monoclonal antibody from the cell culture supernatant using affinity chromatography. The BUB1 monoclonal antibody is created from the BUB1 antibody-producing hybridomas, and during its production, a synthesized peptide derived from human BUB1 is used as the immunogen. The resulting BUB1 recombinant monoclonal antibody is recommended for use in ELISA and WB applications to detect human BUB1 protein.

The BUB1 protein plays a crucial role in the spindle checkpoint pathway during cell division. It is a protein kinase that helps ensure the accurate distribution of chromosomes between daughter cells during mitosis. BUB1 acts as a sensor of improper chromosome alignment at the spindle equator and generates a signal that delays the onset of anaphase until all chromosomes are correctly attached to the mitotic spindle. BUB1 also plays a role in DNA damage response and repair, as well as in maintaining genomic stability. Mutations in the BUB1 gene have been associated with various forms of cancer and chromosomal instability disorders.