纺锤体检查点蛋白抗体

产品货号： mlR4294

英文名称： Bub1

中文名称： 纺锤体检查点蛋白抗体

别　　名： Bub1; BUB1 budding uninhibited by benzimidazoles 1 homolog; BUB1 budding uninhibited by benzimidazoles 1 homolog (yeast); BUB1_HUMAN; BUB1A; BUB1L; Budding uninhibited by benzimidazoles 1 (yeast homolog); Budding uninhibited by benzimidazoles 1 homolog; hBUB1; Mitotic checkpoint serine/threonine protein kinase BUB1; Mitotic checkpoint serine/threonine-protein kinase BUB1; Mitotic spindle checkpoint kinase; Putative serine/threonine protein kinase.

研究领域： 肿瘤　细胞生物　免疫学　细胞周期蛋白

抗体来源： Rabbit

克隆类型： Polyclonal

交叉反应： Human, Mouse, Rat, Dog, Cow, Horse, Rabbit,

产品应用： WB=1:500-2000 ELISA=1:500-1000 IHC-P=1:400-800 IHC-F=1:400-800 IF=1:100-500 （石蜡切片需做抗原修复）

not yet tested in other applications.

optimal dilutions/concentrations should be determined by the end user.

分 子 量： 122kDa

细胞定位： 细胞核

性　　状： Lyophilized or Liquid

浓　　度： 1mg/ml

免 疫 原： KLH conjugated synthetic peptide derived from human Bub1:951-1085/1085

亚　　型： **IgG**

纯化方法： affinity purified by Protein A

储 存 液： 0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.

保存条件： Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

PubMed： **PubMed**

产品介绍 ： Bub1 was initially identified as the mammalian homolog to the yeast protein through a cDNA screen. Bub1 encodes a kinase involved in the formation of the spindle checkpoint, an important mechanism that ensures high fidelity mitotic chromosome segregation. It is thought to be required for assembly of a functional inner centromere, sister chromatid cohesion via targeting of the Shugoshim protein and metaphase congression. Bub1 functions by phosphorylating cdc20, a member of the mitotic checkpoint complex and activating the spindle checkpoint. A related protein kinase Bub3 interacts with Bub1 and targets it to kinetochores prior to chromosome alignment. Mutations in bub1 have been associated with aneuploidy and several forms of cancer.

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. Plays an important role in defining SGOL1 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.

Subunit:

Interacts with BUB3 and CASC5. Interacts (when phosphorylated) with PLK1. The BUB1-BUB3 complex interacts with MAD1L1. Interacts with SV40 Large T antigen; this interaction induces activation of a DNA damage response and promotes p53/TP53 stabilization and phosphorylation (Probable).

Subcellular Location:

Nucleus. Chromosome, centromere, kinetochore.

Tissue Specificity:

Highly expressed in thymus followed by spleen. Preferentially expressed in tissues with a high mitotic index.

Post-translational modifications:

Phosphorylated upon DNA damage, probably by ATM or ATR. 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.

Similarity:

Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. BUB1 subfamily.

Contains 1 BUB1 N-terminal domain.

Contains 1 protein kinase domain.

SWISS:

O43683

Gene ID:

699

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

纺锤体检查点（spindle checkpoint)是细胞周期中的一个重要检查点，由 Mad2、Bub1 等染色体动粒(kinetochore)蛋白构成，像“传感器”一样能感知微管与动粒结合情况和张力。纺锤体检查点阻滞细胞进入分裂后期直到所有染色体着丝点正确与微管联接,确保染色体均等分配,维持基因组稳定性。

产品图片