**Product Name: BubR1 Rabbit Polyclonal Antibody**
**Catalog #: APRab07698**
For research use only.

## Summary

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| **Description** | Rabbit polyclonal Antibody |
| **Host** | Rabbit |
| **Application** | WB,ELISA |
| **Reactivity** | Human,Mouse |
| **Conjugation** | Unconjugated |
| **Modification** | Unmodified |
| **Isotype** | IgG |
| **Clonality** | Polyclonal |
| **Form** | Liquid |
| **Concentration** | 1mg/ml |
| **Storage** | Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles. |
| **Shipping** | Ice bags |
| **Buffer** | Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N. |
| **Purification** | Affinity purification |

## Application

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|---|---|
| **Dilution Ratio** | WB 1:500-1:2000,ELISA 1:10000-1:20000 |
| **Molecular Weight** | 130kDa |

## Antigen Information

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| **Gene Name** | BUB1B |
| **Alternative Names** | BUB1B; BUBR1; MAD3L; SSK1; Mitotic checkpoint serine/threonine-protein kinase BUB1 beta; MAD3/BUB1-related protein kinase; hBUBR1; Mitotic checkpoint kinase MAD3L; Protein SSK1 |
| **Gene ID** | 701.0 |
| **SwissProt ID** | O60566 |
| **Immunogen** | The antiserum was produced against synthesized peptide derived from human BUB1B. AA range:341-390 |

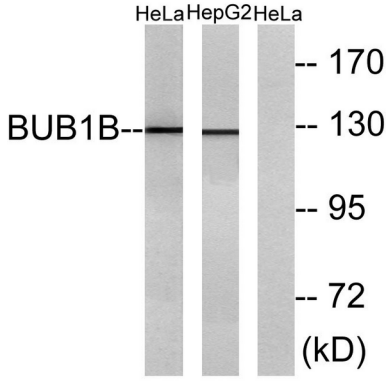
## Background

This gene encodes a kinase involved in spindle checkpoint function. The protein has been localized to the kinetochore and plays a role in the inhibition of the anaphase-promoting complex/cyclosome (APC/C), delaying the onset of anaphase and ensuring proper chromosome segregation. Impaired spindle checkpoint function has been found in many forms of cancer. [provided by RefSeq, Jul 2008],catalytic activity:ATP + a protein = ADP + a phosphoprotein.,disease:Defects in BUB1B are associated with tumor formation.,disease:Defects in BUB1B are the cause of mosaic variegated aneuploidy syndrome (MVA) [MIM:257300]. MVA is a severe autosomal recessive developmental disorder characterized by mosaic aneuploidies, predominantly trisomies and monosomies, involving multiple different chromosomes and tissues. The proportion of aneuploid cells varies but is usually more than 25% and is substantially greater than in normal individuals. Affected individuals typically present with severe intrauterine growth retardation and microcephaly. Eye anomalies, mild dysmorphism, variable developmental delay, and a broad spectrum of additional congenital abnormalities and medical conditions may also occur. The risk of malignancy is high, with rhabdomyosarcoma, Wilms tumor and leukemia reported in several cases. MVA is caused by biallelic mutations in the BUB1B gene.,disease:Defects in BUB1B are the cause of premature chromatid separation trait (PCS) [MIM:176430]. PCS consists of separate and splayed chromatids with discernible centromeres and involves all or most chromosomes of a metaphase. It is found in up to 2% of metaphases in cultured lymphocytes from approximately 40% of normal individuals. When PCS is present in 5% or more of cells, it is known as the heterozygous PCS trait and has no obvious phenotypic effect, although some have reported decreased fertility. Inheritance is autosomal dominant.,domain:The CD1 domain directs kinetochore localization and binding to BUB3.,domain:The D-box targets the protein for rapid degradation by ubiquitin-dependent proteolysis during the transition from mitosis to interphase .,enzyme regulation:Kinase activity stimulated by CENPE.,function:Essential component of the mitotic checkpoint. Required for normal mitosis progression. The mitotic checkpoint delays anaphase until all chromosomes are properly attached to the mitotic spindle. One of its checkpoint functions is to inhibit the activity of the anaphase-promoting complex/cyclosome (APC/C) by blocking the binding of CDC20 to APC/C, independently of its kinase activity. The other is to monitor kinetochore activities that depend on the kinetochore motor CENPE. Also implicated in triggering apoptosis in polyploid cells that exit aberrantly from mitotic arrest. May play a role for tumor suppression.,induction:Induced during mitosis.,PTM:Autophosphorylated in vitro. Intramolecular autophosphorylation is stimulated by CENPE. Phosphorylated during mitosis and hyperphosphorylated in mitotically arrested cells.,PTM:Proteolytically cleaved by caspase-3 in a cell cycle specific manner. The cleavage might be involved in the durability of the cell cycle delay. Caspase-3 cleavage is associated with abrogation of the mitotic checkpoint. The major site of cleavage is at Asp-610.,PTM:Ubiquitinated (Probable). Degradated by the proteasome.,similarity:Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. BUB1 subfamily.,similarity:Contains 1 CD1 domain.,similarity:Contains 1 protein kinase domain.,subcellular location:Cytoplasmic in interphase cells. Associates with the kinetochores in early prophase.,subunit:Interacts with CENPE, CENPF, mitosin and BUB3. Part of a complex containing BUB3, CDC20 and BUB1B. Interacts with anaphase-promoting complex/cyclosome (APC/C).,tissue specificity:Highly expressed in thymus followed by spleen. Preferentially expressed in tissues with a high mitotic index.,

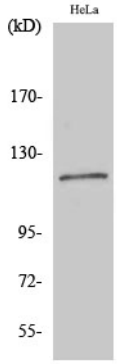
## Research Area

Cell_Cycle_G1S;Cell_Cycle_G2M_DNA;

## Image Data




Western blot analysis of lysates from HeLa and HepG2 cells, treated with H2O2 100uM 30 ', using BUB1B Antibody. The lane on the right is blocked with the synthesized peptide.




Western Blot analysis of various cells using BubR1 Polyclonal Antibody