

Recombinant human BubR1 protein ab133149

5 图像

描述

产品名称	重组人BubR1蛋白
生物活性	The specific activity of ab133149 was determined to be 1.5 nmol/min/mg.
纯度	> 90 % Densitometry. Purity is lot specific. Please contact our technical Support team for details.
表达系统	Baculovirus infected Sf9 cells
Accession	<u>O60566</u>
蛋白长度	Protein fragment
无动物成分	No
性质	Recombinant
种属	Human
预测分子量	50 kDa
氨基酸	613 to 1050
标签	GST tag N-Terminus

技术指标

Our **Abpromise guarantee** covers the use of **ab133149** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

应用	Western blot SDS-PAGE Functional Studies
形式	Liquid
补充说明	<u>ab204878</u> (RS Repeat Peptide peptide) can be utilized as a substrate for assessing kinase activity

制备和贮存

稳定性和存储	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.31% Glutathione, 0.002% PMSF, 0.005% DTT, 0.003% EDTA, 25% Glycerol
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(glycerin, glycerine), 0.88% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

常规信息

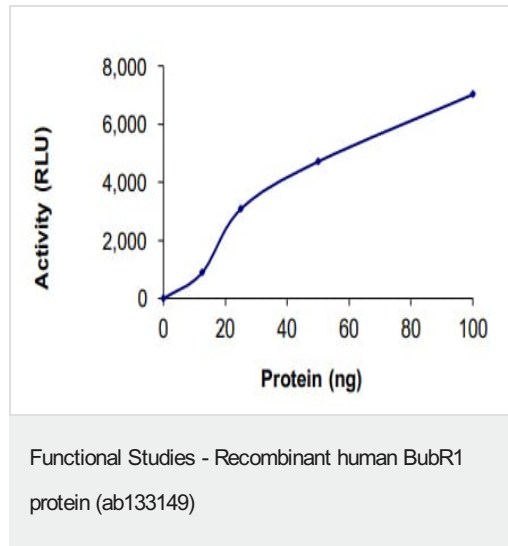
功能	Essential component of the mitotic checkpoint. Required for normal mitosis progression. The mitotic checkpoint delays anaphase until all chromosomes are properly attached to the mitotic spindle. One of its checkpoint functions is to inhibit the activity of the anaphase-promoting complex/cyclosome (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. Required for kinetochore localization of CENPE. Negatively regulates PLK1 activity in interphase cells and suppresses centrosome amplification. Also implicated in triggering apoptosis in polyploid cells that exit aberrantly from mitotic arrest. May play a role for tumor suppression.
组织特异性	Highly expressed in thymus followed by spleen. Preferentially expressed in tissues with a high mitotic index.
疾病相关	<p>Note=Defects in BUB1B are associated with tumor formation.</p> <p>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.</p> <p>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.</p>
序列相似性	<p>Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. BUB1 subfamily.</p> <p>Contains 1 BUB1 N-terminal domain.</p> <p>Contains 1 protein kinase domain.</p>
结构域	<p>The D-box targets the protein for rapid degradation by ubiquitin-dependent proteolysis during the transition from mitosis to interphase.</p> <p>The BUB1 N-terminal domain directs kinetochore localization and binding to BUB3.</p>
翻译后修饰	<p>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.</p> <p>Acetylation at Lys-250 regulates its degradation and timing in anaphase entry.</p> <p>Ubiquitinated. Degradated by the proteasome.</p> <p>Sumoylated by SUMO2 and SUMO3. The sumoylation mediates the association with CENPE at the kinetochore.</p> <p>Autophosphorylated in vitro. Intramolecular autophosphorylation is stimulated by CENPE.</p> <p>Phosphorylated during mitosis and hyperphosphorylated in mitotically arrested cells.</p> <p>Phosphorylation at Ser-670 and Ser-1043 occurs at kinetochores upon mitotic entry with</p>

dephosphorylation at the onset of anaphase.

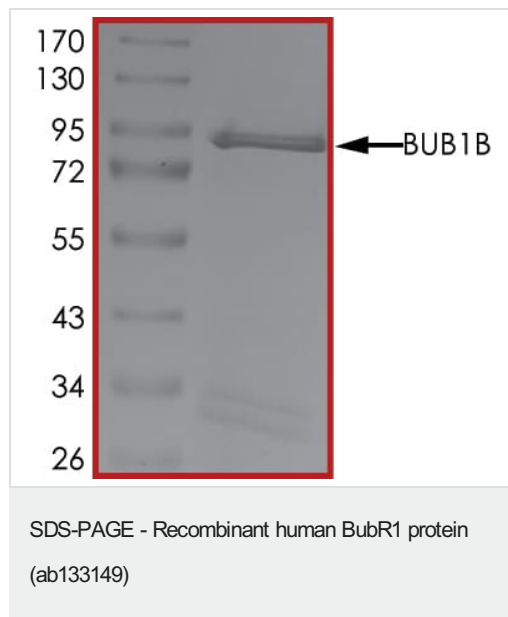
细胞定位

Cytoplasm. Nucleus. Chromosome > centromere > kinetochore. Cytoplasm > cytoskeleton > centrosome. Cytoplasmic in interphase cells. Associates with the kinetochores in early prophase. Kinetochore localization requires BUB1, PLK1 and CASC5.

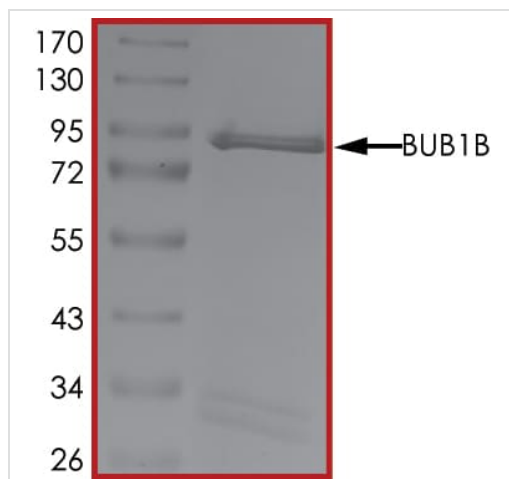
图片



The specific activity of BubR1 (ab133149) was determined to be 0.5 nmol/min/mg as per activity assay protocol and was equivalent to 1.5 nmol/min/mg as per radiometric assay

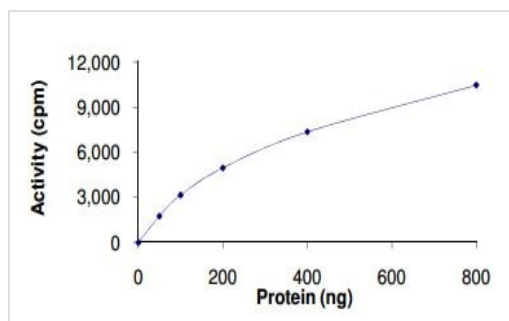


SDS PAGE analysis of ab133149



SDS PAGE analysis of ab133149

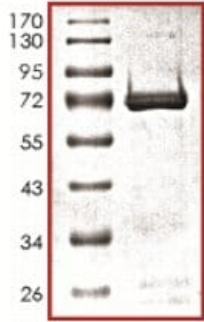
SDS-PAGE - Recombinant human BubR1 protein
(ab133149)



The specific activity of ab133149 was determined to be 1.5 nmol/min/mg.

Functional Studies - Recombinant human BubR1
protein (ab133149)

SDS-PAGE analysis of ab133149.



SDS-PAGE - Recombinant human BubR1 protein
(ab133149)

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