

Datasheet for ABIN3136259

**RPS6KB1 Protein (AA 1-525) (His tag)****1** Image[Go to Product page](#)

## Overview

Quantity:	1 mg
Target:	RPS6KB1
Protein Characteristics:	AA 1-525
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This RPS6KB1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

## Product Details

Sequence: MRRRRRRDGF YLAPDFRHRE AEDMAGVFDI DLDQPEDAGS EDELEEGGQL NESMDHGGVG  
PYELGMEHCE KFEISETSVN RGPEKIRPEC FELLRLVGKG GYGKVFQVRK VTGANTGKIF  
AMKVLKKAMI VRNAKDTAHT KAERNILEEV KHPFIVDLIY AFQTGGKLYL ILEYLSGGEL  
FMQLEREGIF MEDTACFYLA EISMALGHLH QKGIIYRDLK PENIMLNHQQ HVKLTDFGLC  
KESIHDGTVT HTFCGTIEYM APEILMRSGH NRAVDWWSLG ALMYDMLTGA PPFTGENRKK  
TIDKILCKKL NLPPYLTQEA RDLLKKLLKR NAASRLGAGP GDAGEVQAHP FFRHINWEE  
LARKVEPPFK PLLQSEEDVS QFDSKFTRQT PVDSPDDSTL SESANQVFLG FTYVAPSVLE  
SVKEKFSFEP KIRSPRRFIG SPRTVPSPVK FSPGDFWGRG ASASTANPQT PVEYPMETSG  
IEQMDVTVSG EASAPLPIRQ PNSGPYKKQA FPMISKRPEH LRMNL

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

## Product Details

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- Characteristics:
- Made in Germany - from design to production - by highly experienced protein experts.
  - Mouse Rps6kb1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
  - State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made to order protein and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

The concentration of our recombinant proteins is measured using the absorbance at 280nm.

The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

- Purification:
- Two step purification of proteins expressed in baculovirus infected SF9 insect cells:
1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE.
  2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity: >95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility: 0.22 µm filtered

Endotoxin Level: Protein is endotoxin free.

Grade: Crystallography grade

## Target Details

Target:	RPS6KB1
Alternative Name:	Rps6kb1 ( <a href="#">RPS6KB1 Products</a> )
Background:	<p>Serine/threonine-protein kinase that acts downstream of mTOR signaling in response to growth factors and nutrients to promote cell proliferation, cell growth and cell cycle progression. Regulates protein synthesis through phosphorylation of EIF4B, RPS6 and EEF2K, and contributes to cell survival by repressing the pro-apoptotic function of BAD. Under conditions of nutrient depletion, the inactive form associates with the EIF3 translation initiation complex. Upon mitogenic stimulation, phosphorylation by the mammalian target of rapamycin complex 1 (mTORC1) leads to dissociation from the EIF3 complex and activation. The active form then phosphorylates and activates several substrates in the preinitiation complex, including the EIF2B complex and the cap-binding complex component EIF4B. Also controls translation initiation by phosphorylating a negative regulator of EIF4A, PDCD4, targeting it for ubiquitination and subsequent proteolysis. Promotes initiation of the pioneer round of protein synthesis by phosphorylating POLDIP3/SKAR. In response to IGF1, activates translation elongation by phosphorylating EEF2 kinase (EEF2K), which leads to its inhibition and thus activation of EEF2. Also plays a role in feedback regulation of mTORC2 by mTORC1 by phosphorylating RICTOR, resulting in the inhibition of mTORC2 and AKT1 signaling. Mediates cell survival by phosphorylating the pro-apoptotic protein BAD and suppressing its pro-apoptotic function. Phosphorylates mitochondrial RMP leading to dissociation of a RMP:PPP1CC complex. The free mitochondrial PPP1CC can then dephosphorylate RPS6KB1 at Thr-412, which is proposed to be a negative feedback mechanism for the RPS6KB1 anti-apoptotic function. Mediates TNF-alpha-induced insulin resistance by phosphorylating IRS1 at multiple serine residues, resulting in accelerated degradation of IRS1. In cells lacking functional TSC1-2 complex, constitutively phosphorylates and inhibits GSK3B. May be involved in cytoskeletal rearrangement through binding to neurabin. Phosphorylates and activates the pyrimidine biosynthesis enzyme CAD, downstream of MTOR (By similarity). {ECO:0000250, ECO:0000269 PubMed:11493700, ECO:0000269 PubMed:11500364, ECO:0000269 PubMed:15060135, ECO:0000269 PubMed:18952604}.</p>
Molecular Weight:	60.1 kDa Including tag.
UniProt:	<a href="#">Q8BSK8</a>
Pathways:	<a href="#">PI3K-Akt Signaling</a> , <a href="#">RTK Signaling</a> , <a href="#">AMPK Signaling</a> , <a href="#">Regulation of Cell Size</a> , <a href="#">Skeletal Muscle Fiber Development</a> , <a href="#">Feeding Behaviour</a> , <a href="#">G-protein mediated Events</a> , <a href="#">Smooth Muscle Cell Migration</a> , <a href="#">Interaction of EGFR with phospholipase C-gamma</a> , <a href="#">Warburg Effect</a>

## Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Comment:	Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

## Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

## Images



**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process