

Datasheet for ABIN3093513

**RPS6KA3 Protein (AA 1-740) (His tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	RPS6KA3
Protein Characteristics:	AA 1-740
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This RPS6KA3 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

## Product Details

Sequence:	MPLAQLADPW QKMAVESPSD SAENGQQIMD EPMGEEEINP QTEEVSKEI AITHHVKEGH EKADPSQFEL LKVLGQGSFG KVFLVKKISG SDARQLYAMK VLKKATLKVR DRVRTKMED ILVEVNHPFI VKLHYAFQTE GKLYLILDFL RGGDLFTRLS KEVMFTEEDV KFYLAELALA LDHLHSLGII YRDLKPENIL LDEEGHIKLT DFGLSKESID HEKKAYSFCG TVEYMAPEVV NRRGHTQSAD WWSFGVLMFE MLTGTLPFQG KDRKETMTMI LKAKLGMPQF LSPEAQSLLR MLFKRNPANR LGAGPDGVVE IKRHSFFSTI DWNKLYRREI HPPFKPATGR PEDTFYFDPE FTAKTPKDSP GIPPSANAHQ LFRGFSFVAI TSDDSQAMQ TVGVHSIVQQ LHRNSIQFTD GYEVKEDIGV GSYSVCKRCI HKATNMEFAV KIIDKSKRDP TEEIEILLRY GQHPNIITLK DVYDDGKYVY VVTELMKGGE LLDKILRQKF FSEREASAVL FTITKTVEYL HAQGVVHRDL KPSNILYVDE SGNPESIRIC DFGFAQLRA ENGLLMTPCY TANFVAPEVL KRQGYDAACD IWSLGVLLYT MLTGYPFAN GPDDTPEEIL ARIGSGKFSL SGGYWNSVSD TAKDLVSKML HVDPHQRLTA ALVLRHPWIV HWDQLPQYQL NRQDAPHLVK GAMAATYSAL NRNQSPVLEP
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VGRSTLAQRR GIKKITSTAL

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

Characteristics:	<ul style="list-style-type: none"><li>• Made in Germany - from design to production - by highly experienced protein experts.</li><li>• Human RPS6KA3 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.</li><li>• State-of-the-art algorithm used for plasmid design (Gene synthesis).</li></ul> <p>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.</p> <p>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.</p> <p>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).</p> <p>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.</p> <p>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.</p> <p>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.</p>
Purification:	<p>Two step purification of proteins expressed in baculovirus infected SF9 insect cells:</p> <ol style="list-style-type: none"><li>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.</li><li>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.</li></ol>
Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.

## Product Details

Grade: Crystallography grade

## Target Details

Target: RPS6KA3

Alternative Name: RPS6KA3 ([RPS6KA3 Products](#))

**Background:** Serine/threonine-protein kinase that acts downstream of ERK (MAPK1/ERK2 and MAPK3/ERK1) signaling and mediates mitogenic and stress-induced activation of the transcription factors CREB1, ETV1/ER81 and NR4A1/NUR77, regulates translation through RPS6 and EIF4B phosphorylation, and mediates cellular proliferation, survival, and differentiation by modulating mTOR signaling and repressing pro-apoptotic function of BAD and DAPK1. In fibroblast, is required for EGF-stimulated phosphorylation of CREB1 and histone H3 at 'Ser-10', which results in the subsequent transcriptional activation of several immediate-early genes. In response to mitogenic stimulation (EGF and PMA), phosphorylates and activates NR4A1/NUR77 and ETV1/ER81 transcription factors and the cofactor CREBBP. Upon insulin-derived signal, acts indirectly on the transcription regulation of several genes by phosphorylating GSK3B at 'Ser-9' and inhibiting its activity. Phosphorylates RPS6 in response to serum or EGF via an mTOR-independent mechanism and promotes translation initiation by facilitating assembly of the preinitiation complex. In response to insulin, phosphorylates EIF4B, enhancing EIF4B affinity for the EIF3 complex and stimulating cap-dependent translation. Is involved in the mTOR nutrient-sensing pathway by directly phosphorylating TSC2 at 'Ser-1798', which potently inhibits TSC2 ability to suppress mTOR signaling, and mediates phosphorylation of RPTOR, which regulates mTORC1 activity and may promote rapamycin-sensitive signaling independently of the PI3K/AKT pathway. Mediates cell survival by phosphorylating the pro-apoptotic proteins BAD and DAPK1 and suppressing their pro-apoptotic function. Promotes the survival of hepatic stellate cells by phosphorylating CEBPB in response to the hepatotoxin carbon tetrachloride (CCl4). Is involved in cell cycle regulation by phosphorylating the CDK inhibitor CDKN1B, which promotes CDKN1B association with 14-3-3 proteins and prevents its translocation to the nucleus and inhibition of G1 progression. In LPS-stimulated dendritic cells, is involved in TLR4-induced macropinocytosis, and in myeloma cells, acts as effector of FGFR3-mediated transformation signaling, after direct phosphorylation at Tyr-529 by FGFR3. Negatively regulates EGF-induced MAPK1/3 phosphorylation via phosphorylation of SOS1. Phosphorylates SOS1 at 'Ser-1134' and 'Ser-1161' that create YWHAB and YWHAE binding sites and which contribute to the negative regulation of MAPK1/3 phosphorylation (By similarity). {ECO:0000250|UniProtKB:P18654, ECO:0000269|PubMed:10436156, ECO:0000269|PubMed:16213824, ECO:0000269|PubMed:16223362,

## Target Details

	ECO:0000269 PubMed:17360704, ECO:0000269 PubMed:18722121, ECO:0000269 PubMed:8250835, ECO:0000269 PubMed:9770464}.
Molecular Weight:	84.7 kDa Including tag.
UniProt:	<a href="#">P51812</a>
Pathways:	<a href="#">MAPK Signaling</a> , <a href="#">Neurotrophin Signaling Pathway</a> , <a href="#">Activation of Innate immune Response</a> , <a href="#">Toll-Like Receptors Cascades</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:	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)



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