

Datasheet for ABIN3131837

MAPKAP Kinase 5 Protein (AA 1-473) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	MAPKAP Kinase 5 (MAPKAPK5)
Protein Characteristics:	AA 1-473
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This MAPKAP Kinase 5 protein is labelled with His tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS), Crystallization (Crys)

Product Details

Sequence:	<p>MSEDSDMEKA IKETSILEEY SINWTQKLGA GISGPVRVCV KKSTQERFAL KILLDRPKAR NEVRLHMMCA THPNIVQIIE VFANSVQFPH ESSPRARLLI VMEMMEGGEL FHRISQHRHF TEKQASQVTK QIALALQHCH LLNIAHRDLK PENLLFKDNS LDAPVKLCDF GFAKVDQGDL MTPQFTPYVYV APQVLEAQRH HQKEKSGIIP TSPTPYTYNK SCDLWSLGVY IYVMLCGYPP FYSKHHSRTI PKDMRKKIMT GSFEFPEEEW SQISEMAKDV VRKLLKVKPE ERLTIEGVLD HPWLNSTEAL DNVLPASQLM MDAVVAGIQ QAHAQLANM RIQDLKVSLL PLHSVNNPIL RKRKLLGTPK KDGIIYHDHE NGTEDSNVAL EKLKRDVIAQC ILPQAGKGEN EDEKLNEVMQ EAWKYNRECK LLRDALQSFS WNGRGFTDKV DRLKLAEEVK QVIEEQLPH EPQ</p> <p>Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.</p>
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Characteristics:	<ul style="list-style-type: none"> Made in Germany - from design to production - by highly experienced protein experts. Mouse Mapkapk5 Protein (raised in Insect Cells) purified by multi-step, protein-specific
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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: <ol style="list-style-type: none">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:	MAPKAP Kinase 5 (MAPKAPK5)
Alternative Name:	Mapkapk5 (MAPKAPK5 Products)

Target Details

Background:	<p>Tumor suppressor serine/threonine-protein kinase involved in mTORC1 signaling and post-transcriptional regulation. Phosphorylates FOXO3, ERK3/MAPK6, ERK4/MAPK4, HSP27/HSPB1, p53/TP53 and RHEB. Acts as a tumor suppressor by mediating Ras-induced senescence and phosphorylating p53/TP53. Involved in post-transcriptional regulation of MYC by mediating phosphorylation of FOXO3: phosphorylation of FOXO3 leads to promote nuclear localization of FOXO3, enabling expression of miR-34b and miR-34c, 2 post-transcriptional regulators of MYC that bind to the 3'UTR of MYC transcript and prevent MYC translation. Acts as a negative regulator of mTORC1 signaling by mediating phosphorylation and inhibition of RHEB. Part of the atypical MAPK signaling via its interaction with ERK3/MAPK6 or ERK4/MAPK4: the precise role of the complex formed with ERK3/MAPK6 or ERK4/MAPK4 is still unclear, but the complex follows a complex set of phosphorylation events: upon interaction with atypical MAPK (ERK3/MAPK6 or ERK4/MAPK4), ERK3/MAPK6 (or ERK4/MAPK4) is phosphorylated and then mediates phosphorylation and activation of MAPKAPK5, which in turn phosphorylates ERK3/MAPK6 (or ERK4/MAPK4). Mediates phosphorylation of HSP27/HSPB1 in response to PKA/PRKACA stimulation, inducing F-actin rearrangement.</p> <p>{ECO:0000269 PubMed:15538386, ECO:0000269 PubMed:15577943, ECO:0000269 PubMed:16973613, ECO:0000269 PubMed:17254968, ECO:0000269 PubMed:21336308, ECO:0000269 PubMed:21575178}.</p>
Molecular Weight:	55.1 kDa Including tag.
UniProt:	O54992
Pathways:	MAPK Signaling

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