

Datasheet for ABIN3133722

MEK1 Protein (AA 2-393) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	MEK1 (MAP2K1)
Protein Characteristics:	AA 2-393
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This MEK1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence: PKKKPTPIQL NPAPDGS AVN GTSSAETNLE ALQKKLEELE LDEQQRKRLE AFLTQKQKVG
ELKDDDFEKL SELGAGNGGV VFKVSHKPSG LVMARKLIHL EIKPAIRNQI IRELQVLHEC
NSPYIVGFY AFYS DGEISI CMEHMDGGSL DQVLKKAGRI PEQILGK VSI AVIKGLTYLR
EKHKIMHRDV KPSN ILVNSR GEIKLCDFGV SGQLIDSMAN SFVGTRSYMS PERLQGTHYS
VQSDIWSMGL SLVEMAVGRY PIPPPDAKEL ELLFGCHVEG DAAETPPRPR TPGRPLSSYG
MDSRPPMAIF ELLDYIVNEP PPKLPSGVFS LEQDFVNKC LIK NPAERAD LKQLMVHAFI
KRSDAEEVDF AGWLCSTIGL NQPSTPTHAA SI

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

- Characteristics:
- Made in Germany - from design to production - by highly experienced protein experts.
 - Mouse Map2k1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.

Product Details

- 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:	MEK1 (MAP2K1)
Alternative Name:	Map2k1 (MAP2K1 Products)

Target Details

Background: Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Binding of extracellular ligands such as growth factors, cytokines and hormones to their cell-surface receptors activates RAS and this initiates RAF1 activation. RAF1 then further activates the dual-specificity protein kinases MAP2K1/MEK1 and MAP2K2/MEK2. Both MAP2K1/MEK1 and MAP2K2/MEK2 function specifically in the MAPK/ERK cascade, and catalyze the concomitant phosphorylation of a threonine and a tyrosine residue in a Thr-Glu-Tyr sequence located in the extracellular signal-regulated kinases MAPK3/ERK1 and MAPK1/ERK2, leading to their activation and further transduction of the signal within the MAPK/ERK cascade. Depending on the cellular context, this pathway mediates diverse biological functions such as cell growth, adhesion, survival and differentiation, predominantly through the regulation of transcription, metabolism and cytoskeletal rearrangements. One target of the MAPK/ERK cascade is peroxisome proliferator-activated receptor gamma (PPARG), a nuclear receptor that promotes differentiation and apoptosis. MAP2K1/MEK1 has been shown to export PPARG from the nucleus. The MAPK/ERK cascade is also involved in the regulation of endosomal dynamics, including lysosome processing and endosome cycling through the perinuclear recycling compartment (PNRC), as well as in the fragmentation of the Golgi apparatus during mitosis. {ECO:0000269|PubMed:19219045}.

Molecular Weight: 44.3 kDa Including tag.

UniProt: [P31938](#)

Pathways: [MAPK Signaling](#), [RTK Signaling](#), [Interferon-gamma Pathway](#), [Fc-epsilon Receptor Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [Activation of Innate immune Response](#), [Toll-Like Receptors Cascades](#), [Autophagy](#), [Signaling of Hepatocyte Growth Factor Receptor](#), [BCR 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