Datasheet for ABIN3093637

MAP4K2 Protein (AA 1-820) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	MAP4K2
Protein Characteristics:	AA 1-820
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MAP4K2 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MALLRDVSLQ DPRDRFELLQ RVGAGTYGDV YKARDTVTSE LAAVKIVKLD PGDDISSLQQ EITILRECRH PNVVAYIGSY LRNDRLWICM EFCGGGSLQE IYHATGPLEE RQIAYVCREA LKGLHHLHSQ GKIHRDIKGA NLLLTLQGDV KLADFGVSGE LTASVAKRRS FIGTPYWMAP EVAAVERKGG YNELCDVWAL GITAIELGEL QPPLFHLHPM RALMLMSKSS FQPPKLRDKT RWTQNFHHFL KLALTKNPKK RPTAEKLLQH PFTTQQLPRA LLTQLLDKAS DPHLGTPSPE DCELETYDMF PDTIHSRGQH GPAERTPSEI QFHQVKFGAP RRKETDPLNE PWEEEWTLLG KEELSGSLLQ SVQEALEERS LTIRSASEFQ ELDSPDDTMG TIKRAPFLGP LPTDPPAEEP LSSPPGTLPP PPSGPNSSPL LPTAWATMKQ REDPERSSCH GLPPTPKVHM GACFSKVFNG CPLRIHAAVT WIHPVTRDQF LVVGAEEGIY TLNLHELHED TLEKLISHRC SWLYCVNNVL LSLSGKSTHI WAHDLPGLFE QRRLQQQVPL SIPTNRLTQR IIPRRFALST KIPDTKGCLQ CRVVRNPYTG ATFLLAALPT SLLLLQWYEP LQKFLLLKNF SSPLPSPAGM LEPLVLDGKE LPQVCVGAEG PEGPGCRVLF HVLPLEAGLT PDILIPPEGI PGSAQQVIQV DRDTILVSFE

RCVRIVNMQG EPTATLAPEL TFDFPIETVV CLQDSVLAFW SHGMQGRSLD TNEVTQEITD ETRIFRVLGA HRDIILESIP TDNPEAHSNL YILTGHQSTY

Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- 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.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Product Details

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. 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:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	MAP4K2
Alternative Name:	MAP4K2 (MAP4K2 Products)
Background:	Mitogen-activated protein kinase kinase kinase kinase 2 (EC 2.7.11.1) (B lymphocyte serine/threonine-protein kinase) (Germinal center kinase) (GC kinase) (MAPK/ERK kinase kinase kinase 2) (MEK kinase kinase 2) (MEKKK 2) (Rab8-interacting protein),FUNCTION: Serine/threonine-protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Acts as a MAPK kinase kinase kinase (MAP4K) and is an upstream activator of the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway and to a lesser extent of the p38 MAPKs signaling pathway. Required for the efficient activation of JNKs by TRAF6-dependent stimuli, including pathogen-associated molecular patterns (PAMPs) such as polyinosine-polycytidine (poly(IC)), lipopolysaccharides (LPS), lipid A, peptidoglycan (PGN), or bacterial flagellin. To a lesser degree, IL-1 and engagement of CD40 also stimulate MAP4K2-mediated JNKs activation. The requirement for MAP4K2/GCK is most pronounced for LPS signaling, and extends to LPS stimulation of c-Jun phosphorylation and induction of IL-8. Enhances MAP3K1 oligomerization, which may relieve N-terminal mediated MAP3K1 autoinhibition and lead to activation following autophosphorylation. Mediates also the SAP/JNK signaling pathway and the p38 MAPKs signaling pathway through activation of the MAP3Ks MAP3K10/MLK2 and MAP3K11/MLK3. May play a role in the regulation of vesicle targeting or fusion. regulation of vesicle targeting or fusion. {ECO:0000269|PubMed:11784851, ECO:0000269|PubMed:15456887, ECO:0000269|PubMed:17584736, ECO:0000269|PubMed:7477268, ECO:0000269|PubMed:7515885, ECO:0000269|PubMed:9712898}.

Target Details

Molecular Weight:	91.6 kDa
UniProt:	Q12851

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:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
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