Mitogen-Activated Protein Kinase 11 (MAPK11) Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	Mitogen-activated protein kinase 11 (MAPK11), Recombinant Protein
Full Product Name	Recombinant Human Mitogen-activated protein kinase 11 (MAPK11)
Product Gene Name	MAPK11 recombinant protein
Product Synonym Gene Name	MAPK11
Sequence	MSGPRAGFYR QELNKTVWEV PQRLQGLRPV GSGAYGSVCS AYDARLRQKV AVKKLSRPFQ SLIHARRTYR ELRLLKHLKH ENVIGLLDVF TPATSIEDFS EVYLVTTLMG ADLNNIVKCQ ALSDEHVQFL VYQLLRGLKY IHSAGIIHRD LKPSNVAVNE DCELRILDFG LARQADEEMT GYVATRWYRA PEIMLNWMHY NQTVDIWSVG CIMAELLQGK ALFPGSDYID QLKRIMEVVG TPSPEVLAKI SSEHARTYIQ SLPPMPQKDL SSIFRGANPL AIDLLGRMLV LDSDQRVSAA EALAHAYFSQ YHDPEDEPEA EPYDESVEAK ERTLEEWKEL TYQEVLSFKP PEPPKPPGSL EIEQ
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	23,603 Da
Sequence Positions	1-364, Full length protein
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
OMIM	602898
3D Structure	ModBase 3D Structure for Q15759
Species	Human
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for MAPK11 recombinant protein	This protein is a member of the MAP kinase family. MAP kinases act as an integration point for multiple biochemical signals, and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation, and development. This kinase is most closely related to p38 MAP kinase, both of which can be activated by proinflammatory cytokines and environmental stress. This kinase is activated through its phosphorylation by MAP kinase kinases (MKKs), preferably by MKK6. Transcription factor ATF2 CREB2 has been shown to be a substrate of this kinase.
Other Notes	Small volumes of MAPK11 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for MAPK11 purchase	MBS1335847 is a recombinant protein targeting MAPK11. Also known as Recombinant Human Mitogen-activated protein kinase 11 (MAPK11). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MAPK11. It may not necessarily be applicable to this product.

NCBI GI #	20128774
NCBI GeneID	5600
NCBI Accession #	NP_002742.3
UniProt Primary Accession #	Q15759
UniProt Secondary Accession #	O00284; O15472; Q2XNF2; A8K730; B0LPG1; B7Z630; E7ETQ1; L7RT27
UniProt Related Accession #	Q15759
GenBank Nucleotide #	NM_002751.6
NCBI Official Full Name	mitogen-activated protein kinase 11
NCBI Official Synonym Full Names	mitogen-activated protein kinase 11
NCBI Official Symbol	MAPK11
NCBI Official Synonym Symbols	P38B; SAPK2; p38-2; PRKM11; SAPK2B; p38Beta; P38BETA2
UniProt Protein Name	Mitogen-activated protein kinase 11
UniProt Synonym Protein Names	Mitogen-activated protein kinase p38 beta; MAP kinase p38 beta; p38b; Stress-activated protein kinase 2b; SAPK2b; p38-2
UniProt Gene Name	MAPK11
UniProt Synonym Gene Names	PRKM11; SAPK2; SAPK2B; MAP kinase 11; MAPK 11; MAP kinase p38 beta; p38b; SAPK2b
NCBI Protein Information	mitogen-activated protein kinase 11
NCBI Summary for MAPK11	This gene encodes a member of a family of protein kinases that are involved in the integration of biochemical signals for a wide variety of cellular processes, including cell proliferation, differentiation, transcriptional regulation, and development. The encoded protein can be activated by proinflammatory cytokines and environmental stresses through phosphorylation by mitogen activated protein kinase kinases (MKKs). Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2014]

UniProt Comments for MAPK11	Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway. MAPK11 is one of the four p38 MAPKs which play an important role in the cascades of cellular responses evoked by extracellular stimuli such as proinflammatory cytokines or physical stress leading to direct activation of transcription factors. Accordingly, p38 MAPKs phosphorylate a broad range of proteins and it has been estimated that they may have approximately 200 to 300 substrates each. MAPK11 functions are mostly redundant with those of MAPK14. Some of the targets are downstream kinases which are activated through phosphorylation and further phosphorylate additional targets. RPS6KA5/MSK1 and RPS6KA4/MSK2 can directly phosphorylate and activate transcription factors such as CREB1, ATF1, the NF-kappa-B isoform RELA/NFKB3, STAT1 and STAT3, but can also phosphorylate histone H3 and the nucleosomal protein HMGN1. RPS6KA5/MSK1 and RPS6KA4/MSK2 play important roles in the rapid induction of immediate-early genes in response to stress or mitogenic stimuli, either by inducing chromatin remodeling or by recruiting the transcription machinery. On the other hand, two other kinase targets, MAPKAPK2/MK2 and MAPKAPK3/MK3, participate in the control of gene expression mostly at the post-transcriptional level, by phosphorylating ZFP36 (tristetraprolin) and ELAVL1, and by regulating EEF2K, which is important for the elongation of mRNA during translation. MKNK1/MNK1 and MKNK2/MNK2, two other kinases activated by p38 MAPKs, regulate protein synthesis by phosphorylating the initiation factor EIF4E2. In the cytoplasm, the p38 MAPK pathway is an important regulator of protein turnover. For example, CFLAR is an inhibitor of TNF-induced apoptosis whose proteasome-mediated degradation is regulated by p38 MAPK phosphorylation. Ectodomain shedding of transmembrane proteins is regulated by p38 MAPKs as well. In response to inflammatory stimuli, p38 MAPKs phosphorylate the membrane-associated metalloprotease ADAM17. Such phosphorylation is required for ADAM17-mediated ectodomain shedding of TGF-alpha family ligands, which results in the activation of EGFR signaling and cell proliferation. Additional examples of p38 MAPK substrates are the FGFR1. FGFR1 can be translocated from the extracellular space into the cytosol and nucleus of target cells, and regulates processes such as rRNA synthesis and cell growth. FGFR1 translocation requires p38 MAPK activation. In the nucleus, many transcription factors are phosphorylated and activated by p38 MAPKs in response to different stimuli. Classical examples include ATF1, ATF2, ATF6, ELK1, PTPRH, DDIT3, TP53/p53 and MEF2C and MEF2A. The p38 MAPKs are emerging as important modulators of gene expression by regulating chromatin modifiers and remodelers. The promoters of several genes involved in the inflammatory response, such as IL6, IL8 and IL12B, display a p38 MAPK-dependent enrichment of histone H3 phosphorylation on 'Ser-10' (H3S10ph) in LPS-stimulated myeloid cells. This phosphorylation enhances the accessibility of the cryptic NF-kappa-B-binding sites marking promoters for increased NF-kappa-B recruitment.
Research Articles on MAPK11	**1.** Results provide evidence that p38beta is an unusual enzyme that automodulates its basal, MAPKK-independent activity by several autophosphorylation events, which enhance and suppress its catalytic activity.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
Disclaimer	While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice. It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information.
Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

MyBioSource | Tel: +1.858.633.0165 | Fax: +1.858.633.0166 | mybiosource.com/contact-us
Online datasheet: https://www.mybiosource.com/recombinant-protein/mitogen-activated-protein-kinase-11-mapk11/1335847