

Recombinant Human Mitogen-Activated Protein Kinase 9

Cat. No. MAPK9-1265H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human MAPK9 is expressed in E. coli.
Species	Human
Source	E.coli
Description	MAPK9 is an enzyme that in humans is encoded by the MAPK9 gene. The protein encoded by this gene 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.
Form	Sterile filtered liquid in a buffer of 50 mM Tris, pH 7.5 + 0.15 M NaCl + 0.27 M sucrose + 10 mM β-mercaptoethanol + 1 mM EGTA + 0.1% Triton X-100, carrier-free.
Molecular Weight	~ 45 kDa
Purity	> 95% as determined by SDS-PAGE analysis.
Biological Activity	~125 units/mg. One unit of JNK2 alpha1 activity is equal to 1 nanomole of phosphate to recombinant ATF-2 fusion protein per minute at 30°C with a final ATP concentration of 100 μM. Recombinant active JNK2 alpha1 is capable of autophosphorylation and also phosphorylates c-Jun at serine 63 and serine 73. Kinase activity may vary depending on the substrate and reaction conditions. The optimal concentration should be determined for each specific application. JNK2 alpha1

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is shorter than JNK2 alpha2, and contains a five nucleotide insertion in the C terminal region which causes a shift in the reading frame and subsequent premature termination.

Amino Acid Sequence

MSDSKCDSQFYSVQVADSTF TVLKRYQQLK PIGSGAQGIV CAAFDTV LGI
 NVAVKKLSRP FQNQTHAKRA YRELVLLKCVNHKNIISLLN VFTPQKTLEE
 FQDVYLV MEL MDANLCQVIH MELDHERMSY LLYQMLCGIK HLHSAGIIHR
 DLKPSNIVKSDCTLKILDF GLARTACTNF MMTPYVVTRY YRAPEVILGM
 GYKENVDIWS VGCIMGELVK GCVIFQGTDHIDQWNKVIEQ LGTPSAEFMK
 KLQPTVRNYV ENRPKYPGIK FEELFPDWIF PSESERDKIK TSQARDLLSK
 MLVIDPDKRISVDEALRHPY ITVWYDPAEA EAPPPQIYDA QLEEREHAIE
 EWKELIYKEV MDWEERSKNG VVKDQPSAQMQQ

Storage

Centrifuge vial prior to opening. Liquid recombinant human active JNK2 alpha1 should be kept as a solution in order to maintain full activity. This stock solution should be aliquotted and stored at $\leq -80^{\circ}\text{C}$. Avoid repeated freeze-thaw cycles. Product is stable for one year from date of receipt.

Official Symbol

MAPK9

nullValue_other

Function

ATP binding; JUN kinase activity; MAP kinase activity; nucleotide binding; protein binding; protein serine/threonine kinase activity; transferase activity

GENE INFORMATION

Gene Name

MAPK9 mitogen-activated protein kinase 12 [Homo sapiens]

Synonyms

MAPK9; mitogen-activated protein kinase 9; JNK2; SAPK; p54a; JNK2A; JNK2B; PRKM9; JNK-55; JNK2BETA; p54aSAPK; JNK2ALPHA; Jun kinase; MAP kinase 9; c-Jun kinase 2; OTTHUMP00000161542; OTTHUMP00000161543; c-Jun N-terminal

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	kinase 2; stress-activated protein kinase JNK2;mitogen-activated protein kinase 9 isoform JNK2 alpha2; EC 2.7.11.24;Mitogen-activated protein kinase 9; Stress-activated protein kinase JNK2; OTTHUMP00000224159;OTTHUMP00000224168; OTTHUMP00000224169; OTTHUMP00000224170
Gene ID	5601
mRNA Refseq	NM_001135044
Protein Refseq	NP_001128516
MIM	602896
UniProt ID	P45984
Chromosome Location	5q35
Pathway	Adipocytokine signalingpathway; Colorectal cancer; Epithelial cell signaling in Helicobacter pyloriinfection; ErbB signaling pathway; Fc epsilon RI signaling pathway; Focaladhesion; GnRH signaling pathway; Insulin signaling pathway; MAPK signalingpathway; Neurotrophin signaling pathway; Pancreatic cancer; Pathways incancer; RIG-I-like receptor signaling pathway; T cell receptor signalingpathway; Toll-like receptor signaling pathway; Type II diabetes mellitus; Wntsignaling pathway
Rendering based onPDB 3E7O.	