Recombinant Human Mitogen-activated Protein Kinase 9, His-tagged

Cat. No. MAPK9-44H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human JNK2 produced in*E.coli*is a soluble 48 kDa protein that is activated in response to cellular stress, radiation and growth factors. This protein is the full-length form of the protein with a C-terminal His-tagged (His-tag on COOH terminus).
Species	Human
Source	E.coli
Description	JUN N-terminal Kinase 2 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 targets specific transcription factors, and thus mediates immediate-early gene expression in response to various cell stimuli. It is most closely related to MAPK8, both of which are involved in UV radiation induced apoptosis, thought to be related to the cytochrome c-mediated cell death pathway. This gene and MAPK8 are also known as c-Jun N-terminal kinases. This kinase blocks the ubiquitination of tumor suppressor p53, and thus it increases the stability of p53 in nonstressed cells. Studies of this gene"s mouse counterpart suggest a key role in T-cell differentiation. Four alternatively spliced transcript variants encoding distinct isoforms have been reported.
Amino Acid Sequence	MSDSKCDSQFYSVQVADSTFTVLKRYQQLKPIGSGAQGIVCAAFDTVLGINVAVKKL

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	SRPFQNQTHAKRAYRELVLLKCVNHKNIISLLNVFTPQKTLEEFQDVYLVMELMDAN LCQVIHMELDHERMSYLLYQMLCGIKHLHSAGIIHRDLKPSNIVVKSDCTLKILDFGLA RTACTNFMMTPYVVTRYYRAPEVILGMGYKENVDIWSVGCIMGELVKGCVIFQGTD HIDQWNKVIEQLGTPSAEFMKKLQPTVRNYVENRPKYPGIKFEELFPDWIFPSESER DKIKTSQARDLLSKMLVIDPDKRISVDEALRHPYITVWYDPAEAEAPPPQIYDAQLEE REHAIEEWKELIYKEVMDWEERSKNGVVKDQPSDAAVSSNATPSQSSSINDISSMS TEQTLASDTD SSLDASTGPLEGCRGGGSHH HHHH
Purity	Greater than 85% as determined by SDS-PAGE. Mass spectrometry of tryptic digest products for identity determination.
Physical Appearance	Sterile Filtered clear solution.
Formulation	25mM HEPES at pH 8.0, 150mM NaCl, 2mM DTT and 10% glycerol.
Unit Definition	Activity is approximately 200 units/mg. A certificate of analysis is provided, stating the enzymatic activity for each production lot. 1.0 unit of activity is defined as the amount of enzyme required to catalyze the transfer of 1.0 nmole of phosphate from ATP to to a protein substrate per minute at 30ºC.
Storage	Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. Avoid multiple freeze-thaw cycles.

GENE INFORMATION

Gene Name	MAPK9 mitogen-activated protein kinase 9 [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 kinase 2; stress-activated protein kinase JNK2; mitogen-activated protein kinase 9

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	isoform JNK2 alpha2; EC 2.7.11.24; Mitogen-activated protein kinase 9; Stress-activated protein kinase JNK2
Gene ID	5601
mRNA Refseq	NM_001135044
Protein Refseq	NP_001128516
MIM	602896
UniProt ID	P45984
Chromosome Location	5q35
Pathway	Adipocytokine signaling pathway; Colorectal cancer; Epithelial cell signaling in Helicobacter pylori infection; ErbB signaling pathway; Fc epsilon RI signaling pathway; Focal adhesion; GnRH signaling pathway; Insulin signaling pathway; MAPK signaling pathway; Neurotrophin signaling pathway; Pancreatic cancer; Pathways in cancer; RIG-I-like receptor signaling pathway; T cell receptor signaling pathway; Toll-like receptor signaling pathway; Type II diabetes mellitus; Wnt signaling pathway
Function	ATP binding; JUN kinase activity; MAP kinase activity; nucleotide binding; protein binding; protein serine/threonine kinase activity; transferase activity

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