

Recombinant Human MAPK9 Protein (M1-E364), His tagged

Cat. No. MAPK9-1139H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human 6His-TEV-JNK2(M1-E364) (D3K, C6V, S8N, Q14E, K203A, E204A, K250A, K251A) Protein was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	M1-E364
Description	Serine/threonine-protein kinase involved in various processes such as cell proliferation, differentiation, migration, transformation and programmed cell death. Extracellular stimuli such as pro-inflammatory cytokines or physical stress stimulate the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. In this cascade, two dual specificity kinases MAP2K4/MKK4 and MAP2K7/MKK7 phosphorylate and activate MAPK9/JNK2. In turn, MAPK9/JNK2 phosphorylates a number of transcription factors, primarily components of AP-1 such as JUN and ATF2 and thus regulates AP-1 transcriptional activity. In response to oxidative or ribotoxic stresses, inhibits rRNA synthesis by phosphorylating and inactivating the RNA polymerase 1-specific transcription initiation factor RRN3. Promotes stressed cell apoptosis by phosphorylating key regulatory factors including TP53 and YAP1. In T-cells, MAPK8 and MAPK9 are required for polarized differentiation of T-helper cells into Th1 cells. Upon T-cell receptor (TCR) stimulation, is activated by CARMA1, BCL10, MAP2K7 and MAP3K7/TAK1 to regulate JUN protein levels. Plays an important role in the osmotic stress-induced epithelial tight-

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junctions disruption. When activated, promotes beta-catenin/CTNNB1 degradation and inhibits the canonical Wnt signaling pathway. Participates also in neurite growth in spiral ganglion neurons. Phosphorylates the CLOCK-ARNTL/BMAL1 heterodimer and plays a role in the regulation of the circadian clock. Phosphorylates POU5F1, which results in the inhibition of POU5F1's transcriptional activity and enhances its proteosomal degradation.

Form	Liquid
Endotoxin	< 0.01 EU per µg of the protein
Purity	90%
Stability	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
Storage	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Storage Buffer	Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol
Shipping	It is shipped out with blue ice.

GENE INFORMATION

Gene Name	MAPK9 mitogen-activated protein kinase 9 [Homo sapiens (human)]
Official Symbol	MAPK9
Synonyms	MAPK9; mitogen-activated protein kinase 9; PRKM9; JNK2; Jun kinase; p54a; SAPK; MAPK 9; MAP kinase 9; c-Jun kinase 2; c-Jun N-terminal kinase 2; stress-activated

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protein kinase 1a; stress-activated protein kinase JNK2; JNK2A; JNK2B; JNK-55;
SAPK1a; JNK2BETA; p54aSAPK; JNK2ALPHA;

Gene ID 5601

mRNA Refseq NM_001135044

Protein Refseq NP_001128516

MIM 602896

UniProt ID P45984

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