

Recombinant Human Mitogen-activated protein kinase 9(MAPK9)

Catalog No: #AP70529

Package Size: #AP70529-1 20ug #AP70529-2 100ug #AP70529-3 1mg

Description

Product Name	Recombinant Human Mitogen-activated protein kinase 9(MAPK9)
Host Species	E.coli
Purification	Greater than 90% as determined by SDS-PAGE.
Immunogen Description	Expression Region:1-424aaSequence Info:Full Length
Other Names	JNK-55Stress-activated protein kinase 1a ;SAPK1a;Stress-activated protein kinase JNK2c-Jun N-terminal kinase 2
Accession No.	P45984
Calculated MW	64.1 kDa
Tag Info	N-terminal 6xHis-SUMO-tagged
Target Sequence	MSDSKCDSQFYSVQVADSTFTVLKRYQQLPIGSGAQGIVCAAFDVTLVGINVAVKKLSRPFQNTTHAKRAYRE LVLLKCVNHKNIISLLNVFTPQKTLEEFQDVYLVMEMLDANLCQVIHMELDHHERMSYLLYQMLCGIKHLHSAGII HRDLKPSNIVVKSDCTLKILDFGLARTACTNFMMPYVTRYRAPEVILGMGYKENVDIWSVGCIMGELVKGC VIFQGTDHIDQWNKVIEQLGTPSAEFMKKLQPTVRNYVENRPKYPGIKFEELFPDWIFPSESERDKIKTSQARD LLSKMLVIDPDKRISVDEALRHPYITVWYDPAEAEAPPPQIYDAQLEEREHAIEEWKELIYKEVMDWEERSKNG VVKDQPSDAAVSSNATPSQSSSINDISSMSTEQTLASDSDSSLDASTGPLEGCR
Formulation	Tris-based buffer50% glycerol
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C,-80°C. The shelf life of lyophilized form is 12 months at -20°C,-80°C.Notes:Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Background

Serine,threonine-protein kinase involved in various processes such as cell proliferation, differentiation, migration, transformation and programmed cell death. Extracellular domain stimuli such as proinflammatory 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-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 .

References

Signal transduction by tumor necrosis factor mediated by JNK protein kinases. Sluss H.K., Barrett T., Derijard B., Davis R.J. Mol. Cell. Biol. 14:8376-8384(1994) Research Topic: Signal Transduction

Note: This product is for in vitro research use only and is not intended for use in humans or animals.