

## Recombinant Mouse Mapk9 Protein, Myc/DDK-tagged

**Cat. No.** Mapk9-3948M    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <b>Product Overview</b> | Purified recombinant protein of mouse full-length mitogen-activated protein kinase 9 (Mapk9), transcript variant alpha1, with C-terminal MYC/DDK tag, expressed in HEK293T cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>      | <p>Serine/threonine-protein kinase involved in various processes such as cell proliferation, differentiation, migration, transformation and programmed cell death. Extracellular 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</p> |

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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

|                       |                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Molecular Mass</b> | 48 kDa                                                                                                                                        |
| <b>Purity</b>         | > 80% as determined by SDS-PAGE and Coomassie blue staining                                                                                   |
| <b>Stability</b>      | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles. |
| <b>Storage</b>        | Store at -80 centigrade after receiving vials.                                                                                                |
| <b>Concentration</b>  | >50 µg/mL as determined by microplate BCA method                                                                                              |
| <b>Storage Buffer</b> | 25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.                                                                                         |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                        |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | Mapk9 mitogen-activated protein kinase 9 [ Mus musculus (house mouse) ]                                                                                                                                                                                                |
| <b>Official Symbol</b> | Mapk9                                                                                                                                                                                                                                                                  |
| <b>Synonyms</b>        | MAPK9; mitogen-activated protein kinase 9; MAPK 9; Jun kinase; MAP kinase 9; JNK/SAPK alpha; c-Jun N-terminal kinase 2; mitogen activated protein kinase 9; protein kinase, mitogen-activated 9; stress-activated protein kinase JNK2; JNK2; Prkm9; AI851083; p54aSAPK |
| <b>Gene ID</b>         | 26420                                                                                                                                                                                                                                                                  |

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|----------------|--------------|
| mRNA Refseq    | NM_001163672 |
| Protein Refseq | NP_001157144 |
| UniProt ID     | Q9WTU6       |

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