

## Product datasheet for MR227593

### Mapk9 (NM\_207692) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Mapk9 (NM_207692) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mapk9
Synonyms:	AI851083; JNK2; p54aSAPK; Prkm9
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>MR227593 representing NM_207692 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGAGTGACAGTAAAAGCGATGGTCAGTTTTACAGTGTGCAGGTGGCGGACTCAACTTTCACTGTTCTAA  
AACGTTACCAGCAACTGAAACCGATCGGCTCTGGAGCCCAAGGAATTGTTTGTGCTGCTTTTGATACAGT  
TCTTGGGATAAAATGTGGCTGTCAAGAAGTTAAGTCGTCCTTTTCAGAACCAAACGCACGCAAAGAGACCC  
TACCGTGAACCTCGTCCTCTAAAGTGTGTCAATCATAAAAACATAATTAGCTTGTAAATGTGTTACAC  
CACAAAAACGCTAGAAGAATTTCAAGATGTGTACTTGGTAATGGAACCTAATGGATGCTAACTTATGTCA  
GGTTATTCATATGGAACCTGGACCATGAGAGAATGTCTACCTTCTCTACCAGATGCTCTGTGGCATCAAG  
CATCTGCATTCAGCTGGTATCATTATAGAGATTTGAAGCCTAGCAACATTGTAGTAAAAATCAGACTGTA  
CCCTCAAGATCCTTGACTTTGGCCTGGCGCAACAGCCTGTACCAACTTTATGATGACTCCCTATGTGGT  
AACTCGATACTATCGGGCTCCAGAAGTCATCCTGGGCATGGGCTACAAAGAGAATGTTGATATCTGGTCA  
GTGGGTTGCATCATGGGAGAGCTGGTAAAAGTTGTGTGATATTCCAAGTACTGACCAATTGATCAAT  
GGAATAAAGTTATTGAACAGCTAGGAACACCATCCGCAGAGTTTCAAGAAACTTCAGCCAACGTAAG  
GAATTATGTGAAAACAGACCAAAGTACCCTGGAATCAAGTTTGAAGAGCTCTTTCCAGATTGGATATTT  
CCGTCAGAATCTGAGAGAGACAAAATAAAAACAAGTCAAGCCAGAGATCTGTTATCAAAAATGCTAGTGA  
TTGATCCAGACAAGCGGATCTCTGTGGACGAAGCCTTGCGCCACCCGTATATTACTGTTTGGTATGACCC  
CGCTGAAGCAGAAGCGCCACCACCTCAAATTTATGATGCCAGTTGGAAGAAAGAGAGCATGCGATTGAA  
GAGTGGAAAGAGCTAATTTACAAAGAAGTATGGACTGGGAAGAAAGAAGCAAGAATGGGGTAAAAGACC  
AGCCTTCAGATGCAGCAGTAAGTAGCAAGGCTACTCCTTCTCAGTCGTCATCCATCAATGACATCTCATC  
CATGTCCACTGAGCACACCCTGGCCTCAGACACAGACAGCAGTCTCGATGCCTCAACAGGACCCCTGGAA  
GGCTGCCGG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR227593 representing NM\_207692  
Red=Cloning site Green=Tags(s)

MSDSKSDGQFYSVQVADSTFTVLKRYQLKPIGSGAQQIVCAAFDVLGINVAVKKLSRPFQNTAKRA  
 YRELVLLKCVNHKNIISLLNVFTPQKTLEEFQDVYLVMEMLDANLCQVIHMELDHHERMSYLLYQMLCGIK  
 HLHSAGIIHRDLKPSNIVVKSDDLKILDFGLARTACTNFMTPYVVTRYRAPEVILGMGYKENVDIWS  
 VGCIMGELVKGCVIFQGTDHIDQWNKVIIEQLGTPSAEFMKKLQPTVRNRYENRPKYPGIKFEELFPDWIF  
 PSESERDKIKTSQARDLLSKMLVIDDPKRISVDEALRHPYITVWYDPAEAEAPPPQIYDAQLEEREHAIE  
 EWKELIYKEVMDWEERSKNGVKDQPSDAAVSSKATPSQSSSINDISSMSTEHTLASDTSDDLASTGPLE  
 GCR

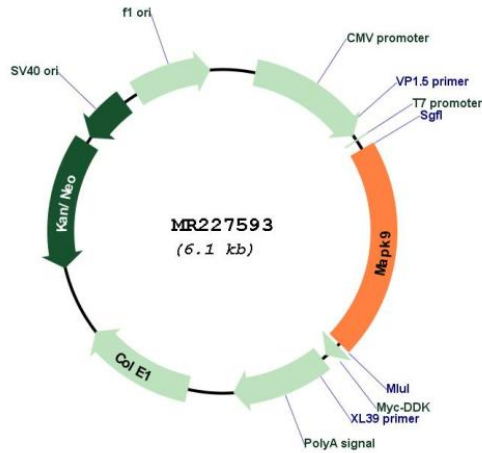
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_207692

ORF Size:	1269 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. <a href="#">More info</a>
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li></ol>
RefSeq:	<a href="#">NM_207692.2</a> , <a href="#">NP_997575.2</a>
RefSeq Size:	4677 bp
RefSeq ORF:	1272 bp
Locus ID:	26420
UniProt ID:	<a href="#">Q9WTU6</a>
Cytogenetics:	11 B1.2
MW:	48.5 kDa

**Gene Summary:**

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 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 (PubMed:22441692). Phosphorylates POU5F1, which results in the inhibition of POU5F1's transcriptional activity and enhances its proteosomal degradation (PubMed:29153991). [UniProtKB/Swiss-Prot Function]