

Product datasheet for **MG227601**

Mapk9 (NM_016961) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Mapk9 (NM_016961) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Mapk9
Synonyms: AI851083; JNK2; p54aSAPK; Prkm9
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG227601 representing NM_016961
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGTGACAGTAAAAGCGATGGTCAGTTTTACAGTGTGCAGGTGGCGGACTCAACTTTCACTGTTCTAA
AACGTTACCAGCAACTGAAACCGATCGGCTCTGGAGCCCAAGGAATTGTTGTGCTGCTTTTGATACAGT
TCTTGGGATAAATGTGGCTGTCAAGAAGTTAAGTCGTCCTTTTCAGAACCAAACGCACGCAAGAGAGCC
TACCGTGAACCGTCCTCTAAAGTGTGCAATCATAAAAAACATAATTAGCTTGTAAATGTGTTACAC
CACAAAAACGCTAGAAGAATTTCAAGATGTGACTTGGTAATGGAACAAATGGATGCTAACTTATGTCA
GGTTATTCATATGGAACGGACCATGAGAGAATGTCTACCTTCTCTACCAGATGCTCTGTGGCATCAAG
CATCTGCATTCAGCTGGTATCATTTCATAGAGATTTGAAGCCTAGCAACATTGTAGTAAAAATCAGACTGTA
CCCTCAAGATCCTTGACTTTGGCCTGGCGCAACAGCCTGTACCAACTTTATGATGACTCCCTATGTGGT
AACTCGATACTATCGGGCTCCAGAAGTCATCCTGGGCATGGGCTACAAAGAGAATGTGGACATCTGGTCT
GTCGGGTGCATCATGGCAGAAATGGTCCTCCATAAAGTCTGTTCCAGGAAGAGACTATATTGATCAAT
GGAATAAAGTTATTGAACAGCTAGGAACACCATCCGCAGAGTTCATGAAGAACTTCAGCCAACGTAAAG
GAATTATGTGGAAAACAGACCAAAGTACCCTGGAATCAAGTTTGAAGAGCTCTTTCCAGATTGGATATT
CCGTCAGAATCTGAGAGAGACAAAATAAAAACAAGTCAAGCCAGAGATCTGTTATCAAAAATGCTAGTGA
TTGATCCAGACAAGCGGATCTCTGTGGACGAAGCCTTGCACACCGTATATTACTGTTTGGTATGACCC
CGCTGAAGCAGAAGCGCCACCACCTCAAATTTATGATGCCAGTTGGAAGAAAGAGAGCATGCGATTGAA
GAGTGGAAAGAGCTAATTTACAAAGAAGTATGACTGGGAAAGAAAGCAAGAATGGGGTAAAAGACC
AGCCTTCAGCACAGATGCAGCAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG227601 representing NM_016961
 Red=Cloning site Green=Tags(s)

MSDSKSDGQFYSVQVADSTFTVLKRYQLKPIGSGAQQIVCAAFDTVLGINVAVKLSRPFQNTAKRA
 YRELVLLKCVNHKNIISLLNVFTPQKLEEFQDVYLVMEMLDANLCQVIHMELDHHERMSYLLYQMLCGIK
 HLHSAGIIHRDLKPSNIVVKSDCSTLKDGLARTACTNFMMPYVVVTRYRRAPEVILGMGYKENVDIWS
 VGCIMAEMVLHKVLFGRDYIDQWNKVIEQLGTPSAEFMKKLQPTVRNYVENRPKYPGIKFEELFPDWIF
 PSESERDKIKTSQARDLLSKMLVIDPKRISVDEALRHPYITVWYDPAEAEAPPPQIYDAQLEEREHAIE
 EWKELIYKEVMDWEERSKNGVKDQPSAQMQQ

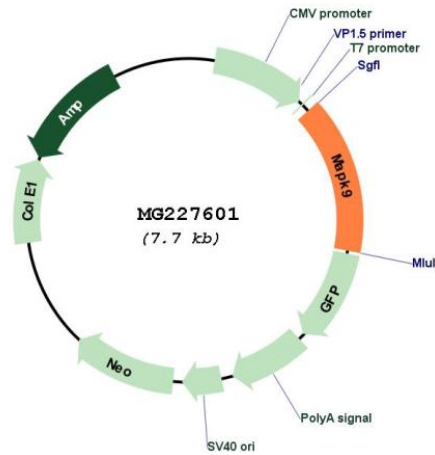
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_016961

ORF Size:	1143 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. More info
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">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.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.
RefSeq:	NM_016961.3 , NP_058657.1
RefSeq Size:	4682 bp
RefSeq ORF:	1146 bp
Locus ID:	26420
UniProt ID:	Q9WTU6
Cytogenetics:	11 B1.2

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]