

## Product datasheet for RC218407

### JNK1 (MAPK8) (NM\_002750) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	JNK1 (MAPK8) (NM_002750) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	JNK1
Synonyms:	JNK; JNK-46; JNK1; JNK1A2; JNK21B1/2; PRKM8; SAPK1; SAPK1c
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC218407 representing NM_002750 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAGCAGAAGCAAGCGTGACAACAATTTTTATAGTGTAGAGATTGGAGATTCTACATTCACAGTCCTGA  
AACGATATCAGAATTTAAAACCTATAGGCTCAGGAGCTCAAGGAATAGTATGCCAGCTTATGATGCCAT  
TCTTGAAAGAAATGTTGCAATCAAGAAGCTAAGCCGACCATTTTCAAGTATCAGACTCATGCCAAGCGGGCC  
TACAGAGAGCTAGTTCTTATGAAATGTGTTAATCACAAAAATATAAATTGGCCTTTTGAATGTTTTACAC  
CACAGAAATCCCTAGAAGAATTTCAAGATGTTTACATAGTCATGGAGCTCATGGATGCAAAATCTTTGCCA  
AGTGATTCAGATGGAGCTAGATCATGAAAGAATGTCTACCTTCTCTATCAGATGCTGTGTGGAATCAAG  
CACCTTCAATTCGCTGGAATTATTCATCGGGACTTAAAGCCAGTAATATAGTAGTAAAACTCGATTGCA  
CTTTGAAGATTCTTGACTTCGGTCTGGCCAGGACTGCAGGAACGAGTTTTATGATGACGCCTTATGTAGT  
GACTCGCTACTACAGAGCACCCGAGGTCATCCTTGGCATGGGCTACAAGGAAAACGTGGATTTATGGTCT  
GTGGGGTGCATTATGGGAGAAATGGTTTGCACAAAATCCTCTTTCCAGGAAGGGACTATATTGATCAGT  
GGAATAAAGTTATTGAACAGCTTGAACACCATGTCCTGAATTCATGAAGAACTGCAACCAACAGTAAG  
GACTTACGTTGAAAACAGACCTAAATATGCTGGATATAGCTTTGAGAACTCTTCCCTGATGTCCTTTTC  
CCAGCTGACTCAGAACAACAACAACTTAAAGCCAGTCAGGCAAGGATTTGTTATCCAAAATGCTGGTAA  
TAGATGCATCTAAAAGGATCTCTGTAGATGAAGCTCTCCAACACCCGTACATCAATGTCTGGTATGATCC  
TTCTGAAGCAGAAGCTCCACCACCAAGATCCCTGACAAGCAGTTAGATGAAAGGGAACACACAATAGAA  
GAGTGGAAAGAATTGATATATAAGGAAGTTATGGACTTGGAGGAGAGAACCAAGAATGGAGTTATACGGG  
GGCAGCCCTCTCTTTAGCACAGGTGCAGCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC218407 representing NM\_002750  
 Red=Cloning site Green=Tags(s)

MSRSKRDNFYSVEIGDSTFTVLKRYQNLKPIGSGAQQIVCAAYDAILERNVAIKKLSRPFQNTTHAKRA  
 YRELVLKMCVNHKNIIGLLNVFTPQKSLEEFQDVYIVMELMDANLCQVIQMELDHERMSYLLYQMLCGIK  
 HLHSAGIIHRDLKPSNIVVKSDDLKILDFGLARTAGTSFMTPYVVTRYRAPEVILGMGYKENVDLWS  
 VGCIMGEMVCHKILFPGRDYIDQWNKVIEQLGTPCPEFMKKLQPTVRTYVENRPKYAGYSFEKLPDVLV  
 PADSEHNKLGASQARDLLSKMLVIDASKRISVDEALQHPYINVWYDPSEAEAPPPKIPDKQLDEREHTIE  
 EWKELIYKEVMDLEERTKNGVIRGQPSPLAQVQQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6104\\_f06.zip](https://cdn.origene.com/chromatograms/mk6104_f06.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_002750

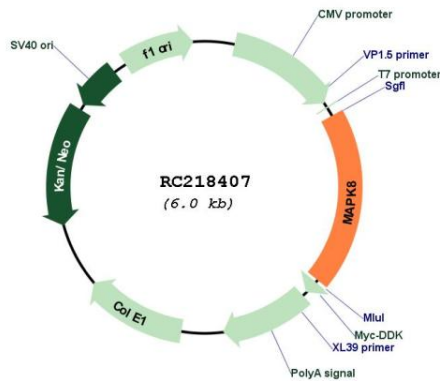
**ORF Size:** 1152 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

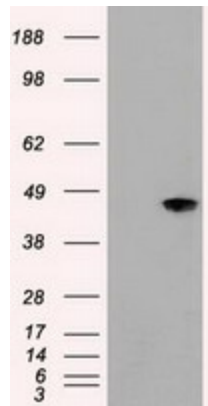
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<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>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_002750.3</a>
<b>RefSeq Size:</b>	1417 bp
<b>RefSeq ORF:</b>	1155 bp
<b>Locus ID:</b>	5599
<b>Cytogenetics:</b>	10q11.22
<b>Domains:</b>	pkinase, TyrKc, S_TKc
<b>Protein Families:</b>	Druggable Genome, ES Cell Differentiation/IPS, Protein Kinase
<b>Protein Pathways:</b>	Adipocytokine signaling pathway, Colorectal cancer, Epithelial cell signaling in Helicobacter pylori infection, ErbB signaling pathway, Fc epsilon RI signaling pathway, Focal adhesion, GnRH signaling pathway, Insulin signaling pathway, MAPK signaling pathway, Neurotrophin signaling pathway, NOD-like receptor signaling pathway, Pancreatic cancer, Pathways in cancer, Progesterone-mediated oocyte maturation, RIG-I-like receptor signaling pathway, Toll-like receptor signaling pathway, Type II diabetes mellitus, Wnt signaling pathway
<b>MW:</b>	44 kDa
<b>Gene Summary:</b>	The protein encoded by this gene is a member of the MAP kinase family. MAP kinases act as an integration point for multiple biochemical signals, and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. This kinase is activated by various cell stimuli, and targets specific transcription factors, and thus mediates immediate-early gene expression in response to cell stimuli. The activation of this kinase by tumor-necrosis factor alpha (TNF-alpha) is found to be required for TNF-alpha induced apoptosis. This kinase is also involved in UV radiation induced apoptosis, which is thought to be related to cytochrom c-mediated cell death pathway. Studies of the mouse counterpart of this gene suggested that this kinase play a key role in T cell proliferation, apoptosis and differentiation. Several alternatively spliced transcript variants encoding distinct isoforms have been reported. [provided by RefSeq, Apr 2016]

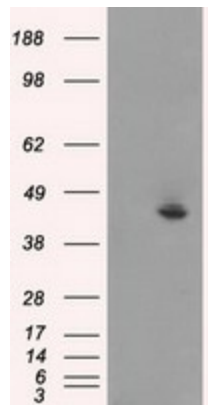
Product images:



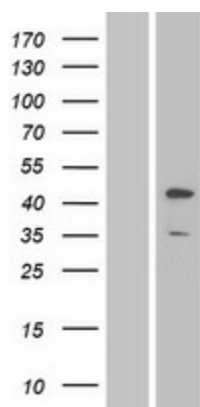
Circular map for RC218407



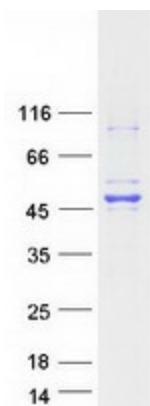
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY JNK1 (RC218407, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-JNK1 ([TA500043]). Positive lysates [LY400970] (100ug) and [LC400970] (20ug) can be purchased separately from OriGene.



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY JNK1 (Cat# RC218407, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-JNK1 (Cat# [TA500081]). Positive lysates [LY400970] (100ug) and [LC400970] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY408400]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC222829] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MAPK8 protein (Cat# [TP318407]). The protein was produced from HEK293T cells transfected with MAPK8 cDNA clone (Cat# RC218407) using MegaTran 2.0 (Cat# [TT210002]).



Anti-JNK1 mouse monoclonal antibody ([TA500043]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY JNK1 (RC218407).