

## Product datasheet for **RG238220**

### MEK7 (MAP2K7) (NM\_001297555) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MEK7 (MAP2K7) (NM_001297555) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MAP2K7
Synonyms:	JNKK2; MAPKK7; MEK; MEK 7; MKK7; PRKMK7; SAPKK-4; SAPKK4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG238220 representing NM_001297555. Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTGTAGTGAACCGTCAGAATTTGTAAACGACTACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGCGGCGTCCCTCCCTGGAACAGAAGCTGTCCCCTGGAAGCAAAGCTGAAGCAGGAGAACCGGGAG
GCCCGGGAGGATCGACCTCAACCTGGATATCAGCCCCAGCGGCCAGGCCATTATTGTGATCACT
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GAACACAGCTTCAAGCGCTACGAGACGCTGGAGGTGGACGTGGCGTCTGTTCAAGGATGTCATG
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ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```



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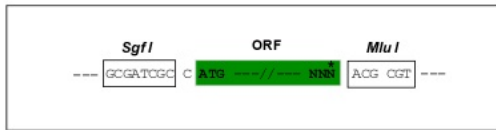
**Protein Sequence:** >Peptide sequence encoded by RG238220  
 Blue=ORF Red=Cloning site Green=Tag(s)

MAASSLEQKLSRLEAKLKQENREARRRIDLNLDISPQRPRPIIVITLSPAPAPSQRAALQLPLANDGGS  
 RSPSSESSPQHPTTPARPRHMLGLPSTLFTPRSMESIEIDQKLQEIMKQTGYLTIGGQRYQAEINDLEN  
 LGEMSGTCCGQVWKMFRKTHGVIIVKQMRSGNKEENKRILMDLDVVVKSHDCPYIVQCFGTFITNTD  
 VFIAMELMGTCAEKLKRMQGP IPERILGKMTVAIVKALYYLKEKHGVIHRDVKPSNILLDERGQIKLC  
 DFGISGRLVDSKAKTRSGCAAYMAPERIDPPDPTKPDYDIRADVWSLGLSLVELATGQFPYKNCKTDF  
 EVLTKVLQEEPPLLPGHMGFSGDFQSFVKDCLTKDHRKRPKYNKLLLEHSFIKRYETLEVDVASWFKDVM  
 AKTESPRTSGVLSQPHLPFFR  
**TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV**  
 MGYGFYHFGTYPSGYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED  
 SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMHFKAISHPSILQNGGPMFA  
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



Kozac  
Consensus

EcoRI    BamHI KpnI    RBS    SgfI    AscI

CTATAGGCGCGCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCCGCGCATCGCCGCGCCAGATCT

HindIII    NheI    RsrII    MluI    NotI    XhoI    GFP Tag

CAAGCTTAAGCTAGCTAGCGGACCG    ACG CGT    ACG CGG    CCG CTC GAG    ATG GAG AGC GAC --- --- ---

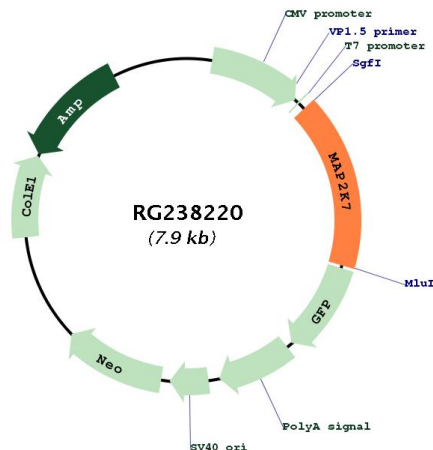
T R T R P L E M E S D - - -

PmeI    FseI

--- --- GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT

- - E E R V Stop

## Plasmid Map:



ACCN: NM\_001297555

ORF Size: 1305 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).

RefSeq: [NM\\_001297555.2](#)

RefSeq Size: 3525 bp

RefSeq ORF: 1308 bp

Locus ID: 5609

UniProt ID: [Q14733](#)

Cytogenetics: 19p13.2

Protein Families: Druggable Genome, Protein Kinase

Protein Pathways: ErbB signaling pathway, Fc epsilon RI signaling pathway, GnRH signaling pathway, MAPK signaling pathway, Neurotrophin signaling pathway, T cell receptor signaling pathway, Toll-like receptor signaling pathway

MW: 49.5 kDa

**Gene Summary:**

The protein encoded by this gene is a dual specificity protein kinase that belongs to the MAP kinase kinase family. This kinase specifically activates MAPK8/JNK1 and MAPK9/JNK2, and this kinase itself is phosphorylated and activated by MAP kinase kinase kinases including MAP3K1/MEKK1, MAP3K2/MEKK2, MAP3K3/MEKK5, and MAP4K2/GCK. This kinase is involved in the signal transduction mediating the cell responses to proinflammatory cytokines, and environmental stresses. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2014]