

Product datasheet for **RC207115**

MEK3 (MAP2K3) (NM_145109) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Tag: | Myc-DDK |
| Symbol: | MEK3 |
| Synonyms: | MAPKK3; MEK3; MKK3; PRKMK3; SAPKK-2; SAPKK2 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| ORF Nucleotide Sequence: | >RC207115 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAGTCGCCCCGCTCGAGCCAGCCCGCCAGCATGCCCCAGTCCAAAGGAAAAATCCAAGAGGAAGAAGG
ATCTACGGATATCCTGCATGTCCAAGCCACCCGCACCCACCCACCCCGGAACCTGGACTCCCG
GACCTTCATCACCATTGGAGACAGAACTTTGAGGTGGAGGCTGATGACTTGGTGACCATCTCAGAACTG
GGCCGTGGAGCCTATGGGGTGGTAGAGAAGGTGCGGCACGCCAGAGCGGCACCATCATGGCCGTGAAGC
GGATCCGGGCCACCGTGAACCTCACAGGAGCAGAAGCGGCTGCTCATGGACCTGGACATCAACATGCCAC
GGTCGACTGCTTCTACACTGTCACTTCTACGGGGCACTATTAGAGAGGGAGACGTGTGGATCTGCATG
GAGCTCATGGACACATCCTTGGACAAGTTCTACCGGAAGGTGCTGGATAAAAAACATGACAATTCCAGAGG
ACATCCTTGGGGAGATTGCTGTGTCTATCGTGCGGGCCCTGGAGCATCTGCACAGCAAGCTGTCGGTGAT
CCACAGAGATGTGAAGCCCTCCAATGTCCTTATCAACAAGGAGGGCCATGTGAAGATGTGTGACTTTGGC
ATCAGTGGCTACTTGGTGGACTCTGTGGCAAGACGATGGATGCCGGCTGCAAGCCCTACATGGCCCTG
AGAGGATCAACCCAGAGCTGAACCAGAAGGGCTACAATGTCAAGTCCGACGTCTGGAGCCTGGGCATCAC
CATGATTGAGATGGCCATCCTGCGGTTCCCTTACGAGTCTGGGGGACCCGTTCCAGCAGCTGAAGCAG
GTGGTGGAGGAGCCGTCCCCCAGCTCCAGCCGACCGTTTCTCCCCGAGTTTGTGGACTTCACTGCTC
AGTGCCTGAGGAAGAACCCGCAGAGCGTATGAGCTACCTGGAGCTGATGGAGCACCCCTCTTTCACCTT
GCACAAAACCAAGAAGACGGACATTGCTGCCTTCGTGAAGGAGATCCTGGGAGAAGACTCA

ACGCGTACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC207115 protein sequence
Red=Cloning site Green=Tags(s)

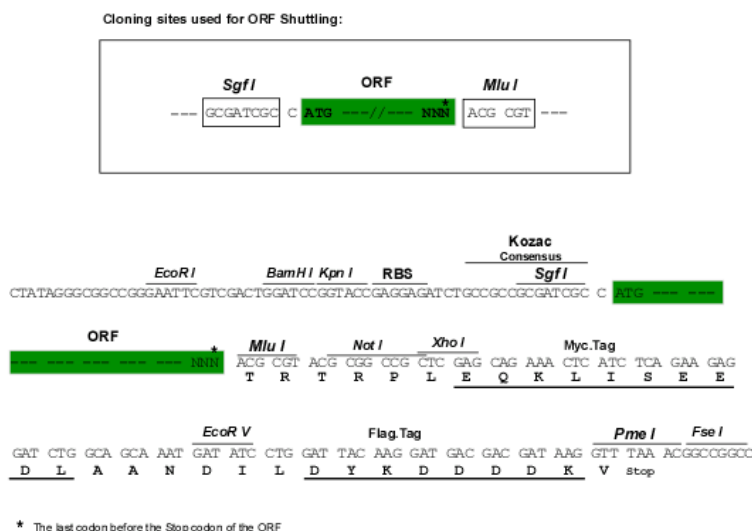
MESPASSQPASMPQSKGKSKRKDLRISCSKPPAPNPTPPRNLDSRTFITIGDRNFEVEADDLVTISEL
 GRGAYGVVEKVRHAQSGTIMAVKRIRATVNSQEQRLLMDLDINMRTVDCFYTVTFYGALFREGDVWICM
 ELMDSLDFYRKVLDKNMTIPEDILGEIAVSIVRALEHLHLSKLSVIHRDVKPSNVLINKEGHVKMCDFG
 ISGYLVDSVAKTMDAGCKPYMAPERINPELNQKGYNVKSVDVSLGITMIEMAILRFPYESWGTPTFQQLKQ
 VVEEPPQLPADRFSPEFVDFTAQCLRKNPAPERMSYLELMEHPFFTLHKTKKDIAAFVKEILGEDS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6136_a03.zip

Restriction Sites: Sgfl-MluI

Cloning Scheme:



ACCN: NM 145109

ORF Size: 1041 bp

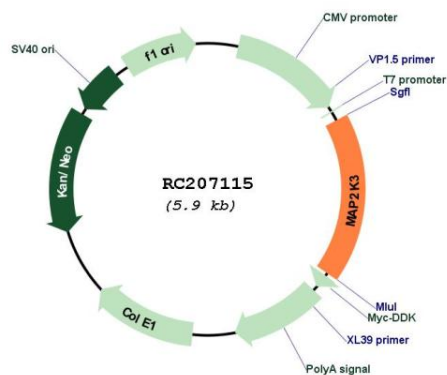
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

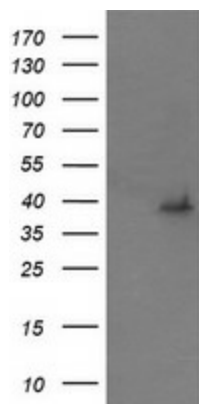
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

| | |
|-------------------------------|--|
| 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. |
| Note: | Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required. |
| RefSeq: | <u>NM_145109.3</u> |
| RefSeq Size: | 2319 bp |
| RefSeq ORF: | 1044 bp |
| Locus ID: | 5606 |
| UniProt ID: | <u>P46734</u> |
| Cytogenetics: | 17p11.2 |
| Domains: | pkinase, TyrKc, S_TKc |
| Protein Families: | Druggable Genome, Protein Kinase, Transcription Factors |
| Protein Pathways: | Amyotrophic lateral sclerosis (ALS), Fc epsilon RI signaling pathway, GnRH signaling pathway, MAPK signaling pathway, Toll-like receptor signaling pathway |
| MW: | 39.3 kDa |
| Gene Summary: | <p>The protein encoded by this gene is a dual specificity protein kinase that belongs to the MAP kinase kinase family. This kinase is activated by mitogenic and environmental stress, and participates in the MAP kinase-mediated signaling cascade. It phosphorylates and thus activates MAPK14/p38-MAPK. This kinase can be activated by insulin, and is necessary for the expression of glucose transporter. Expression of RAS oncogene is found to result in the accumulation of the active form of this kinase, which thus leads to the constitutive activation of MAPK14, and confers oncogenic transformation of primary cells. The inhibition of this kinase is involved in the pathogenesis of Yersina pseudotuberculosis. Multiple alternatively spliced transcript variants that encode distinct isoforms have been reported for this gene. [provided by RefSeq, Jul 2008]</p> |

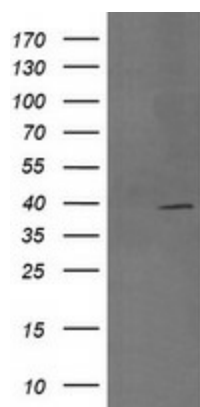
Product images:



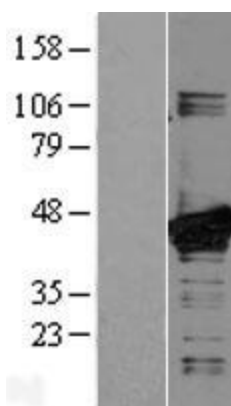
Circular map for RC207115



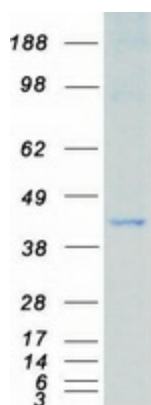
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY MAP2K3 (RC207115, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MAP2K3 (TA505701). Positive lysates [LY403425] (100ug) and [LC403425] (20ug) can be purchased separately from OriGene.



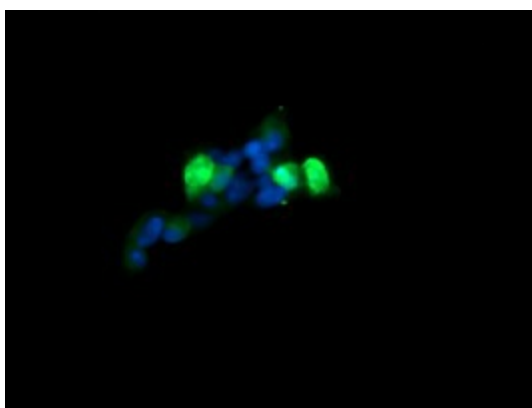
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY MAP2K3 (Cat# RC207115, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MAP2K3 (Cat# [TA505876]). Positive lysates [LY403425] (100ug) and [LC403425] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY403425]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207115 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MAP2K3 protein (Cat# [TP307115]). The protein was produced from HEK293T cells transfected with MAP2K3 cDNA clone (Cat# RC207115) using MegaTran 2.0 (Cat# [TT210002]).



Anti-MAP2K3 mouse monoclonal antibody ([TA505701]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY MAP2K3 (RC207115).