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# Product datasheet for RC224739

## MPEG1 (NM_001039396) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | MPEG1 (NM_001039396) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | MPEG1 |
| **Synonyms:** | Mpg-1; MPG1; MPS1; P-2 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

>RC224739 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAACAACTTCAGGGCCACCATCCTCTTCTGGGCAGCGGCAGCATGGGCTAAATCAGGCAAGCCTTCGG
GAGAGATGGACGAAGTTGGAGTTCAAAAATGCAAGAATGCCTTGAAACTACCTGTCCTGGAAGTCCTACC
TGGAGGGGGCTGGGACAATCTGCGGAATGTGGACATGGGACGAGTTATGGAATTGACTTACTCCAACTGC
AGGACAACAGAGGATGGACAGTATATCATCCCTGATGAAATCTTCACCATTCCCCAGAAACAGAGCAACC
TGGAGATGAACTCAGAAATCCTGGAATCCTGGGCAAATTACCAGAGTAGCACCTCCTACTCCATCAACAC
AGAACTCTCTCTTTTTTCCAAAGTCAATGGCAAGTTTTCCACTGAGTTCCAGAGGATGAAGACCCTCCAA
GTGAAGGACCAAGCTATAACTACCCGAGTTCAGGTAAGAAACCTCGTCTACACAGTCAAAATCAACCCAA
CTTTAGAGCTAAGCTCAGGTTTTAGGAAGGAACTCCTTGACATCTCTGACCGTCTAGAGAACAACCAGAC
GAGGATGGCCACCTACCTGGCAGAACTCCTGGTGCTCAACTATGGCACCCACGTCACCACCAGTGTCGAC
GCTGGGGCTGCTCTTATTCAGGAGGACCACCTCAGGGCCTCCTTCCTCCAAGACAGCCAGAGCAGTCGTA
GTGCCGTGACCGCCTCTGCTGGACTTGCCTTTCAAAACACCGTGAACTTCAAATTTGAGGAAAACTATAC
CTCGCAGAATGTCCTCACCAAGAGCTACCTCTCAAACCGAACCAACTCCAGGGTGCAGAGCATTGGAGGG
GTTCCTTTTTACCCAGGCATCACCCTCCAGGCCTGGCAGCAGGGTATCACCAACCACCTGGTGGCCATCG
ACCGCTCTGGCCTGCCGCTGCATTTCTTCATCAACCCCAACATGCTACCTGACTTGCCAGGCCCCCTGGT
GAAGAAGGTGTCAAAGACAGTGGAAACTGCTGTGAAGCGCTATTATACATTCAACACCTACCCTGGCTGC
ACAGATCTCAATTCTCCCAACTTCAATTTTCAGGCCAACACGGATGATGGCTCCTGCGAGGGGAAAATGA
CCAACTTCTCTTTCGGTGGGGTTTATCAGGAATGCACTCAGCTCTCAGGGAATAGGGATGTCCTCCTCTG
CCAAAAGTTGGAGCAGAAGAATCCACTCACTGGTGATTTCTCCTGCCCCTCTGGCTACTCCCCGGTGCAC
CTGTTATCCCAGATCCACGAGGAGGGTTACAACCACCTGGAGTGTCATCGAAAGTGCACTCTCCTCGTCT
TCTGCAAGACCGTGTGTGAAGATGTGTTCCAGGTGGCAAAAGCTGAATTTAGGGCTTTTTGGTGTGTGGC
CAGCAGCCAAGTACCTGAAAACTCAGGACTGCTTTTTGGGGGCCTCTTCAGCAGCAAGAGCATAAACCCC
ATGACAAATGCACAGTCATGCCCAGCCGGCTACTTTCCACTGAGACTCTTTGAAAACCTCAAGGTATGTG
TTTCTCAGGACTATGAGTTGGGAAGCAGGTTTGCGGTCCCCTTTGGCGGGTTCTTTAGCTGCACAGTTGG
GAACCCCCTGGTAGATCCTGCTATATCCAGAGATTTAGGGGCACTGTCTCTGAAAAAGTGCCCCGGGGGC
TTCAGCCAGCACCCAGCCCTCATCAGCGATGGATGCCAAGTGTCCTATTGCGTCAAATCCGGGCTCTTCA
CAGGAGGGTCCCTGCCCCCTGCCAGGCTCCCACCTTTCACCCGGCCACCCCTCATGAGTCAGGCTGCCAC
CAATACTGTCATAGTGACCAATTCTGAGAATGCGAGATCCTGGATTAAAGACTCCCAGACCCACCAGTGG
AGGCTGGGAGAACCGATAGAGCTGCGGAGGGCCATGAATGTCATCCATGGGGATGGTGGTGGTCTGTCAG
GAGGGGCTGCAGCTGGGGTCACAGTGGGGGTCACCACCATTCTGGCTGTTGTTATCACCTTGGCCATCTA
CGGCACCCGGAAGTTCAAGAAGAAAGCATATCAGGCAATTGAGGAAAGGCAGAGTTTGGTTCCAGGCACT
GCAGCAACTGGAGACACCACTTACCAAGAGCAGGGGCAGAGTCCAGCT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC224739 protein sequence
Red=Cloning site Green=Tags(s)

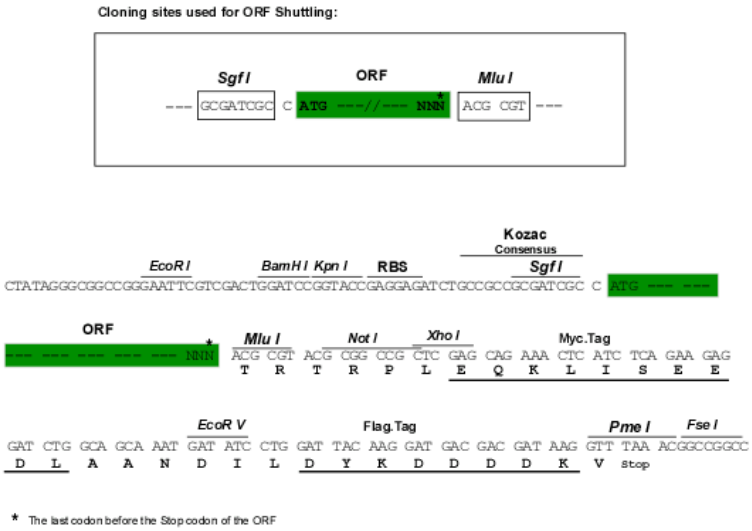
MNNFRATILFWAAAAWAKSGKPSGEMDEVGVQKCKNALKLPVLEVLPGGGWDNLRNVDMGRVMELTYSNC
RTTEDGQYIIPDEIFTIPQKQSNLEMNSEILESWANYQSSTSYSINTELSLFSKVNGKFSTEFQRMKTLQ
VKDQAITTRVQVRNLVYTVKINPTLELSSGFRKELLDISDRLENNQTRMATYLAELLVLNYGTHVTTSVD
AGAALIQEDHLRASFLQDSQSSRSAVTASAGLAFQNTVNFKFEENYTSQNVLTKSYLSNRTNSRVQSIGG
VPFYPGITLQAWQQGITNHLVAIDRSGLPLHFFINPNMLPDLPGPLVKKVSKTVETAVKRYYTFNTYPGC
TDLNSPNFNFQANTDDGSCEGKMTNFSFGGVYQECTQLSGNRDVLLCQKLEQKNPLTGDFSCPSGYSPVH
LLSQIHEEGYNHLECHRKCTLLVFCKTVCEDVFQVAKAEFRAFWCVASSQVPENSGLLFGGLFSSKSINP
MTNAQSCPAGYFPLRLFENLKVCVSQDYELGSRFAVPFGGFFSCTVGNPLVDPAISRDLGALSLKKCPGG
FSQHPALISDGCQVSYCVKSGLFTGGSLPPARLPPFTRPPLMSQAATNTVIVTNSENARSWIKDSQTHQW
RLGEPIELRRAMNVIHGDGGGLSGGAAAGVTVGVTTILAVVITLAIYGTRKFKKKAYQAIEERQSLVPGT
AATGDTTYQEQGQSPA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mk6460_h10.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



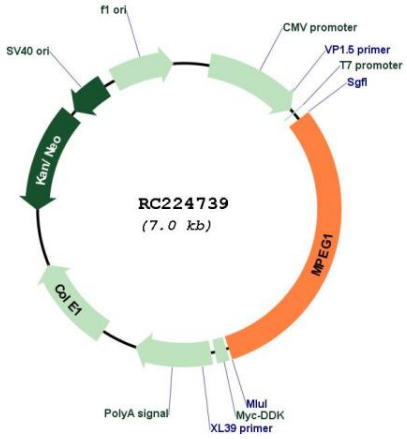

**ACCN:** NM_001039396

**ORF Size:** 2148 bp

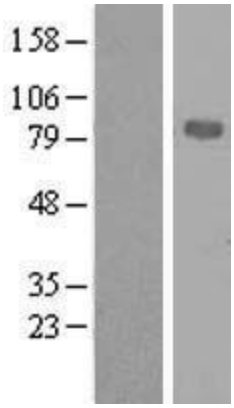
| | |
|---|---|
| **OTI Disclaimer:** | Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional 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 or by calling 301.340.3188 option 3 for pricing and delivery.<br><br>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:** | 1. Centrifuge at 5,000xg for 5min.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_001039396.1, NP_001034485.1 |
| **RefSeq Size:** | 4527 bp |
| **RefSeq ORF:** | 2151 bp |
| **Locus ID:** | 219972 |
| **UniProt ID:** | Q2M385 |
| **Cytogenetics:** | 11q12.1 |
| **Protein Families:** | Transmembrane |
| **MW:** | 78.6 kDa |

**Gene Summary:** Plays a key role in the innate immune response following bacterial infection by inserting into the bacterial surface to form pores (By similarity). By breaching the surface of phagocytosed bacteria, allows antimicrobial effectors to enter the bacterial periplasmic space and degrade bacterial proteins such as superoxide dismutase sodC which contributes to bacterial virulence (By similarity). Shows antibacterial activity against a wide spectrum of Gram-positive, Gram-negative and acid-fast bacteria (PubMed:23753625, PubMed:26402460, PubMed:30609079). Reduces the viability of the intracytosolic pathogen L.monocytogenes by inhibiting acidification of the phagocytic vacuole of host cells which restricts bacterial translocation from the vacuole to the cytosol (By similarity). Required for the antibacterial activity of reactive oxygen species and nitric oxide (By similarity).[UniProtKB/Swiss-Prot Function]

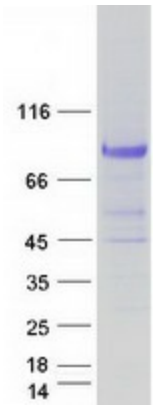
## Product images:




Circular map for RC224739




Western blot validation of overexpression lysate (Cat# [LY422045]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC224739 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).




Coomassie blue staining of purified MPEG1 protein (Cat# [TP324739]). The protein was produced from HEK293T cells transfected with MPEG1 cDNA clone (Cat# RC224739) using MegaTran 2.0 (Cat# [TT210002]).