

## Product datasheet for **RG224739**

### **MPEG1 (NM\_001039396) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MPEG1 (NM_001039396) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MPEG1
Synonyms:	Mpg-1; MPG1; MPS1; P-2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG224739 representing NM\_001039396  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAACAACCTTCAGGGCCACCATCCTCTTCTGGGCAGCGGCAGCATGGGCTAAATCAGGCAAGCCTTCGG  
 GAGAGATGGACGAAGTTGGAGTTCAAAAATGCAAGAATGCCTTGAACTACCTGTCTGGAAGTCTTACC  
 TGGAGGGGGCTGGGACAATCTGCGGAATGTGGACATGGGACGAGTTATGGAATTGACTTACTCCTCAACTGC  
 AGGACAACAGAGGATGGACAGTATATCATCCCTGATGAAATCTTACCATTCCCCAGAAACAGAGCAACC  
 TGGAGATGAACTCAGAAATCCTGGAATCCTGGGCAAATACCAGAGTAGCACCTCCTACTCCATCAACAC  
 AGAACTCTCTTTTTTCCAAAGTCAATGGCAAGTTTTCCACTGAGTTCCAGAGGATGAAGACCCTCCAA  
 GTGAAGGACCAAGCTATAACTACCCGAGTTCAGGTAAGAAACCTCGTCTACACAGTCAAAATCAACCCAA  
 CTTTAGAGCTAAGCTCAGGTTTTAGGAAGGAACCTTGCATCTCTGACCGTCTAGAGAACAACCAGAC  
 GAGGATGGCCACCTACCTGGCAGAACTCCTGGTGTCAACTATGGCACCCACGTACCACCAGTGTGCGAC  
 GCTGGGGCTGCTCTTATTCAGGAGGACCACCTCAGGGCCTCCTTCTCCAAGACAGCCAGAGCAGTCTGTA  
 GTGCCGTGACCGCTCTGCTGGACTTGCCTTTCAAACACCGTGAACCTCAAATTTGAGGAAAACATAAC  
 CTCGCAGAATGTCCTACCAAGAGCTACCTCTCAAACCGAACCAACTCCAGGGTGCAGAGCATTGGAGGG  
 GTTCTTTTTACCAGGCATCACCTCCAGGCCTGGCAGCAGGGTATCACCAACCACCTGGTGGCCATCG  
 ACCGCTCTGGCCTGCCGTGCATTTCTTCAACCCCAACATGCTACCTGACTTGCAGGCCCCCTGGT  
 GAAGAAGTGTCAAAGACAGTGGAACTGCTGTGAAGCGCTATTATACATTCAACACCTACCCTGGCTGC  
 ACAGACTCAATTCTCCAACTTCAATTTTCAGGCCAACACGGATGATGGCTCCTGCGAGGGGAAAATGA  
 CCAACTTCTCTTTCGGTGGGTTTATCAGGAATGCACTCAGCTCTCAGGGAATAGGGATGTCCTCCTCTG  
 CAAAAGTTGGAGCAGAAGAATCCACTCACTGGTGATTTCTCCTGCCCTCTGGCTACTCCCGGTGCAC  
 CTGTTATCCCAGATCCACGAGGAGGTTACAACCACCTGGAGTGCATCGAAAGTGCCTCTCTCGTCT  
 TCTGCAAGACCGTGTGTGAAGATGTGTTCCAGGTGGCAAAGCTGAATTTAGGGCTTTTTGGTGTGTGGC  
 CAGCAGCCAAGTACCTGAAAACCTCAGGACTGCTTTTTGGGGCCTCTCAGCAGCAAGAGCATAAACCC  
 ATGACAAATGCACAGTCAAGCCAGCCGGCTACTTCCACTGAGACTCTTTGAAAACCTCAAGGTATGTG  
 TTTCTCAGGACTATGAGTTGGGAAGCAGGTTTGGCGTCCCCTTTGGCGGTTCTTTAGCTGCACAGTTGG  
 GAACCCCTGGTAGATCCTGCTATATCCAGAGATTTAGGGGCACTGTCTCTGAAAAAGTGCCCCGGGGC  
 TTCAGCCAGCACCCAGCCCTCATCAGCGATGGATGCCAAGTGTCTATTGCGTCAAATCCGGGCTCTTCA  
 CAGGAGGGTCCCTGCCCTGCCAGGCTCCACCTTTCACCCGGCCACCCCTCATGAGTCAAGGCTGCCAC  
 CAATACTGTCATAGTGACCAATTCTGAGAATGCGAGATCCTGGATTAAGACTCCAGACCCACCAGTGG  
 AGGCTGGGAGAACCAGATAGAGCTGCGGAGGGCCATGAATGTATCCATGGGGATGGTGGTGTGTGTCAG  
 GAGGGGCTGCAGCTGGGGTACAGTGGGGTACCACCATTTGGCTGTTGTTATCACCTTGCCATCTA  
 CGGCACCCGGAAGTTCAAGAAGAAAGCATATCAGGCAATTGAGGAAAGGCAGAGTTTGGTTCAGGCACT  
 GCAGCAACTGGAGACCACTTACCAAGAGCAGGGGCAGAGTCCAGCT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG224739 representing NM\_001039396  
 Red=Cloning site Green=Tags(s)

MNNFRATILFWAAAAWAKSGKPSGEMDEVGVQKCKNALKLPVLEVLPGGGWDLNRNVDMGRVMELETYSNC  
 RTTEDGQYIIPDEIFTIPQKQSNLEMNSEILES WANYQSSTSYSINTELSLFSKVNGKFSTEFQRMKTLD  
 VKDQAITTRVQVRNLVYTVKINPTLELSSGRKELLDISDRLENNQTRMATYLAELLVLNYGTHVTTSDV  
 AGAALIQEDHLRASFLQDSQSSRSVAVTASAGLAFQNTVNFKFEENYTSQNVLT KSYLSNRTNSRVQSIGG  
 VPFYPGITLQAWQQGITNHLVAIDRSGPLHFFINPNMLPDLPGPLVKKVSKTVETAVKRYTTFNTYPGC  
 TDLNSPNFNFQANTDDGSGCEGKMTNFSFGGVYQECTQLSGNRDVLLCQKLEQKNPLTGDFSCPSGYSPVH  
 LLSQIHEEGYNHLECHRKCTLLVFKTVCEDEVQVAKAEFRAFVCVASSQVPENSGLLFGGLFSSKSNP  
 MTNAQSCPAGYFPLRLFENLKVCSQDYELGSRFAVPFGGFFSCTVGNPLVDPAISRD LGALSLKKCPGG  
 FSQHPALISDGCQVSYCVKSGLFTGGSLPPARLPFTRPPLMSQAATNTVIVTNSENARSWIKDSQTHQW  
 RLGEPIELRRAMNVIHGDDGGLSGGAAAGVTVGVTITLAVVITLAIYGRKFKKKAYQAIIEERQSLVPGT  
 AATGDTTYQEQGQSPA

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



**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](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](#)

**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.
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\\_001039396.1](#), [NP\\_001034485.1](#)

**RefSeq Size:** 4527 bp

**RefSeq ORF:** 2151 bp

**Locus ID:** 219972

**UniProt ID:** [Q2M385](#)

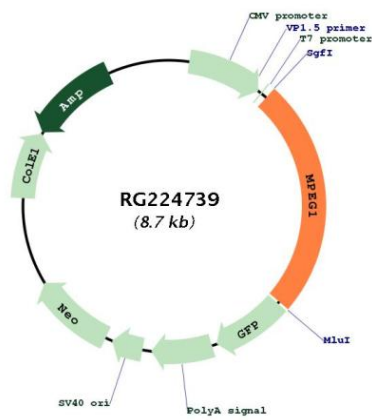
**Cytogenetics:** 11q12.1

**Protein Families:** Transmembrane

**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 RG224739