

## Product datasheet for **RG204507**

### OMA1 (NM\_145243) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	OMA1 (NM_145243) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	OMA1
Synonyms:	2010001O09Rik; DAB1; MPRP-1; MPRP1; peptidase; YKR087C; ZMPOMA1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG204507 representing NM\_145243  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGAGCTTCATCTGTGGATTGCAGTCTGCTGCTAGAAACCATGTTTTCTCCGATTAATCACTGTCTA  
 ACTGGAGAAAATGTAACACATTAGCATCCACCTCACGGGGCTGTCATCAAGTACAAGTTAACCATATAGT  
 AAATAAGTATCAGGGACTGGGAGTAAATCAGTGTGACAGGTGGAGTTTTCTGCCTGGAACTTTTCATTTT  
 TATAGTACTTTTAAACAACAAAAGAACAGGAGGCCTCTCAAGTACCAAAAGTAAGGAAATTTGGAGGATTA  
 CCAGCAATGACTGTATGGAATGATGCTTTTTCAAGACAGCTGCTAATAAAAAGAAGTTACAGCAGTCCC  
 TAGTCTGTCAGTATTGCATCCTTAAGCCCTGCTTCCATAAGAGCTATTAGGAATTTCCATACTTCTCCA  
 CGGTTTCAAGCTGCTCCGGTTCCTCTTGTGATGATTCTTAAACCAGTACAGAAGTTATTTGCAATCA  
 TTGTAGGCAGGGCATAAGGAAATGGTGGCAGGCACTTCTCCTAACAAGAAGGAAGTAGTTAAAGAAA  
 TATAAGGAAGAATAAATGGAAGCTATTCCTTGGTTTGGTGTGTTTGGATTGCTCTTTGGTGTTTTAT  
 TTTACTCACCTGGAAGTAAGTCCAATCACAGGAAGGAGCAAGCTACTATTATTGGGGAAAGAAGCAGTTCA  
 GACTTTTTATCGGAACTGGAATATGAAGCATGGATGGAAGAATTTAAAAATGATATGCTAACTGAGAAAGA  
 TGCCCGATACCTGGCTGTTAAAGAAGTGCTTTGTGTCATTAATTGAATGCAATAAAGATGTTCCAGGGATC  
 TCTCAGATCAATTGGGTTATTCATGTGGTTGATCCCCAATTATTAATGCCTTCGTGCTTCCAAATGGAC  
 AAATGTTTGTCTTCACTGGATTTTTAAATAGTGTAAACCGATTCATCACTTTCTTTCTTCTGGGCCA  
 TGAAATAGCACATGCAGTACTTGGGCATGCTGCAGAAAAGGCTGGCATGGTTCATTTGTTGGATTTCTTA  
 GGTATGATTTTCTCACAAATGATTTGGCCATTTGTCTCGAGATAGCTTGGCAGTCTTTGGCCAGTGGI  
 TACAGCTAAATTCAGGAGTATATGTTAATAGACCATACAGCAGAAAATTTGGAGCCGAGGAGTACAA  
 AATTGGACTACTGCTTGCTGCAAAGCTTGTGTCAGACATAAGAGCCAGTTCAGTGTTTTGGCAGCAAATG  
 GAGTTCGTTGATAGCCTGCATGGCCAACCAAGATGCCAGAATGGTTATCTACACACCCCTTCTCATGGCA  
 ATCGAGTTGAGTACTTGGATAGACTTATACCTCAGGCTCTCAAAATAGAGAGATGTGTAATTGTCCACC  
 ACTGTCTAATCCAGACCCTCGATTACTATTCAAACCTCAGCACGAAGCATTTTCTTGAAGAATCAGAGAAA  
 GAAGACCTAAATATCACGAAGAAACAGAAAATGGATACTTCTCTATTCAAAAACAGGAGCAAATACCAT  
 TAACATACATAGTTGAGAAAAGAACGGGCAGT

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG204507 representing NM\_145243  
 Red=Cloning site Green=Tags(s)

MSFICGLQSAARNHVFFRFNSLSNWRKCNLSTSRGCHQVQVNHVINKYQGLGVNQCDRWSFLPGNFHF  
 YSTFNNKRTGGLSSTKSKEIWRITSKCTVWDAFSRQLLIKEVAVPSLSVLHPLSPASIRAIRNFHTSP  
 RFQAAPVPLLLMILKPVQKLFVIVGRGIRKWWQALPPNKKEVKENIRKNKWKLFGLSSFGLLFVVFY  
 FTHLEVSPITGRSKLLLLGKEQFRLLESEYEAWMEEFKNDMLTEKDARYLAVKEVLCHECNKDVPGI  
 SQINWVIHVVDSPINAFVLPNGQMFVFTGFLNSVTDIHQLSFLLGHEIAHAVLGHAAEKAGMVHLLDFL  
 GMIFLTMIIWAICPRDSLALLCQWIQSKLQYMFNRPYSRLEAEADKIGLLLAACACADIRASSVFQQM  
 EFVDSLHGQPKMPEWLSTHPSHGMRVEYLDRLIPQALKIREMCNCPPLSNPDRLLFKLSTKHFLFEESEK  
 EDLNITKKQKMDTLPIQKQEQIPLTYIVEKRTGS

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_145243

**ORF Size:** 1572 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:**

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\\_145243.5](#)

**RefSeq Size:** 1928 bp

**RefSeq ORF:** 1575 bp

**Locus ID:** 115209

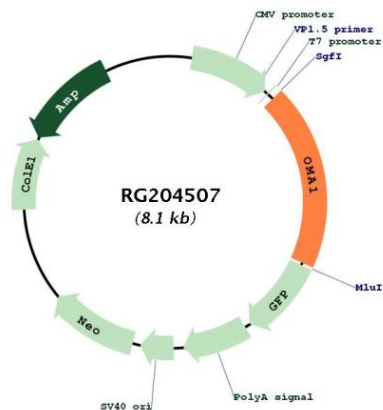
**UniProt ID:** [Q96E52](#)

**Cytogenetics:** 1p32.2-p32.1

**Protein Families:** Druggable Genome, Protease, Transmembrane

**Gene Summary:** Metalloprotease that is part of the quality control system in the inner membrane of mitochondria. Following stress conditions that induce loss of mitochondrial membrane potential, mediates cleavage of OPA1 at S1 position, leading to OPA1 inactivation and negative regulation of mitochondrial fusion. May also cleave UQC33 under these conditions. Its role in mitochondrial quality control is essential for regulating lipid metabolism as well as to maintain body temperature and energy expenditure under cold-stress conditions. [UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for RG204507