

## Product datasheet for **MR231457**

### Opa1 (NM\_001199177) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Opa1 (NM_001199177) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Opa1
Synonyms:	1200011N24Rik; AI225888; AI847218; lilr3; mKIAA0567
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR231457 representing NM\_001199177  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTGGCGAGCAGGTGCGGCGCCGTGGCCTGTGAAGTCTGCCAATCCTTAGTGAACACAGTTCTGGAA  
 TACAAAGAAACGTACCGCTCCAAAACTCCATCTGGTTTCACGAAGTATTATCGTTCACATCATCCTGC  
 CCTCAAGCTTCAAAGACCCCAACTAAGGACACCATTTTCAGCAGTTCTCTTCTCTAACTCACCTTTTATTA  
 CATAAATTGAACTTTCTCCAATTAATATGGCTACCAGCCCCGAGAACTTTTGGCCAGCAAGGTTAG  
 CTGCAAGACTCTTAAACTTCGATATATCATACTGGGATCTGCTGTTGGAGGTGGCTATACAGCCAAAA  
 AACCTTCGATGAATGAAAGATATGATACCAGACCTTAGTACTATAAGTGGATTGTGCCTGACTTTATA  
 TGGGAAATTGATGAGTATATTGATTTGGAGAAAATTAGAAAAGCCCTGCCAGCTCAGAAGACCTTGCCA  
 GTTTAGCTCCCGACCTGGACAAGATTACTGAGAGCCTCAGCTTGTGAAGGACTTCTTCACTGCAGGTCC  
 CAAATTGGTTAGTGAAGTCTAGAACTTCTGAGGCCCTTCTTGTAGTTTCACTGGAGAAACAGCA  
 TTTCGAGCAACAGATCATGGATCTGAAAGTGACAAGCATTACAGGAAGGTGTGAGACAAAGAAAAGATTG  
 ACCAACTTCAAGAAGAACTTCTGCATACTCAGTTAAAGTATCAGAGGATCTTGGAGCGCCTGGAAAAGGA  
 GAACAAAGAGCTGCGGAAGCTGGTGTGCAAGAGGACGACAAAGGCATCCACCACAGGAAGCTCAAGAAA  
 TCTTTGATTGATATGATTCTGAAGTCTTGTGTTCTTCTGATTATGATGCCAGTTACAATACACAAG  
 ATCACCTACCACGGGTTGTTGTGGTTGGAGATCAGAGTCTGGGAAAACAGTGTGCTGGAAATGATTGC  
 TCAGGCCCGGATCTCCCGAGAGGTCCGGCGAGATGATGACACGCTCTCCAGTGAAGGTGACTCTCAGT  
 GAAGCCCTCACCATGTGGCCTGTTTAAAGTAGCTCTCGGGAATTTGATCTACCAAGGAGGAAGATC  
 TTGCAGCATTAAAGACATGAAATCGAATCCGAATGAGGAAAAATGTGAAAGAAGTTGTACTGTTAGCCC  
 CGAGACCATATCTCTAAATGTCAAAGCCCTGGGCTGCAGAGGATGGTGTCTGTGGACTTGCCCTGGTGT  
 ATCAACACCGTGACATCAGGCATGGCTCCCGACACAAAGGAAACTATTTTCAAGTATCAGCAAGGTTACA  
 TGCAGAATCCTAACGCCATCATCTGTGCATCCAAGACGGATCCGTAGATGCTGAGCGCAGTATTGTTAC  
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 AATCTCAGCCTTGTGTGTCAGACTGCTTTTGGAAAATGGTTCGAGAGTCAAGTTGAACAACAGGCTGATA  
 GTTTTAAAGCCACGCGCTTAAACCTAGAGACGGAATGGAAGAATAACTACCCGCGCTGCGAGAGCTCGA  
 CAGGAATGAACTCTTTGAAAAGCTAAAATGAGATCCTCGATGAGGTATCAGTCTGAGCCAGGTACAG  
 CCAAAGCACTGGGAGGAAATCCTGCAGCAATCCCTGTGGGAACGAGTGTCAACACATGTGATTGAGAACA  
 TCTACCTTCCAGCTGCCAGACCATGAATTCGGGAACATTTAACACCACAGTAGACATCAAGCTTAAACA  
 GTGGACTGACAAGCAGCTTCTAATAAAGCAGTCGAGGTTGCCTGGGAGACTCTACAAGAGGAATTTTCC  
 CGTTCATGACAGAACCCAAAGGAAAGGAACACGACGACATATTTGACAACTTAAAGGAGGTGTGAAGG  
 AGGAGAGTATCAAGCGGCACAAGTGAACGACTTTGCCGAGGATAGCTTGAGGTTATTCAGCACAAATGC  
 TTTGGAAGACCGGTCCATATCAGATAAGCAACAGTGGGATGCAGCCATTTACTTCAAGAGGAGCGCTT  
 CAAGGTCGTCTCAAGGATCTGAAAATGCTATTGAAAACATGATTGGGCCAGACTGGAAAAGAGGTGGA  
 TGTACTGGAAGAATCGGACCAAGAGCAGTGTGTTTCAACGAAACCAAGAACGAGTTGGAGAAGATGCT  
 GAAGGTTAATGATGAGCACCAGCTTACCTGGCAAGTGTGAGATTACCACAGTCCGGAAGAACCTGGAG  
 TCTCGAGGAGTGAAGTCGATCCAAGCTTGATTAAGGATACTTGGCATCAAGTTTATAGAAGACATTTCT  
 TAAAAACAGCTCTAAATCATTGTAACTTTGTGCGCAGAGGTTTTTATTACTACCAGAGGCATTTTATAGA  
 TTCTGAGCTGGAATGCAATGACGTGGTCTGTTTTGGCGAATACAGCGCATGCTCGCTATCACTGCCAAT  
 ACATTAAGGCAGCAGCTTACAAACTGAAGTTAGGCGACTAGAGAAAAACGTTAAAGAGGTATTAGAAG  
 ATTTTGCAGAAGACGGTGAAGAAGGTTAAATGCTCACTGGCAAACGAGTTCAGCTGGCAGAAGATCT  
 CAAGAAAGTTAGAGAAATCAAGAAAAGCTTGATGCTTTCATTGAAGCTTTCACCAGGAGAAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR231457 representing NM\_001199177  
 Red=Cloning site Green=Tags(s)

MWRAGRAAVACEVCQSLVKHSSGIQRNVPLQKLHLVSRSIYRSHHPALKLQRPQLRTPFQQFSSLTHLSL  
 HKLKLSPIKYGYQPRNFWPARLAARLLKLYIILGSVGGGYTAKKTFDEWKDMIPDLSDYKWIVPDFI  
 WEIDEYIDLEKIRKALPSSDLASLAPDLDKITESLSLLKDFFTAGPKLVSEVLEVSEALLLLGSPGETA  
 FRATDHGSESDKHRYKVSDEKEIDQLQEELLHTQLKYQRILERLEKENKELRKLVLQKDDKGIHHRKLLK  
 SLIDMYSEVLDVLSDYDASYNTQDHLPRVWVVGQVSAGKTSVLEMI AQARIFPRGSGEMMTRSPVKVTL  
 EGP HHVALFKDSSREFDLTKEEDLAALRHEIELRMRKNVKEGCTVSPETISLNVKGPGLQRMVLDLPGV  
 INTVTSGMAPDTKETIFSISKAYMQNPNAIILCIQDGSVDAERSIVTDLVSQMDPHGRRTIFVLTKVDLA  
 EKNVASPSRIQQIIEGKLFPMKALGYFAVVTGKGNSSSEIEAIREYEEFFQNSKLLKTSMLKAHQVTTR  
 NLSLAVSDCFWKMVRESVEQQADSFKATRFNLETEWKNNYPRLRELDNELFEKAKNEILDEVISLSQVT  
 PKHWEEILQQSLWERVSTHVIENIYLPAAQTMNSGTFNTTVDIKLKQWTDKQLPNKAVEVAWETLQEEFS  
 RFMTEPKGKEHDDIFDKLKEAVKEESIKRHKWDF AEDSLRVIQHNALEDRSISDKQQWDAAIYFMEEAL  
 QGRLKDTENAIENMIGPDWKKRWMYWKNRTEQECVHNETKNELEKMLKVNDHPAYLASDEITTVRKNLE  
 SRGVEVDP SLIKDTWHQVYRRHFLKTALNHCNLCRRGFYYYQRHFIDSELECNDVVLFWRIQRMLAITAN  
 TLRQQLNTEVRRLEKNVKEVLEDAEDGEKVKLLTGKRVQLAEDLKKVREIQEKLDALFEALHQEK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:

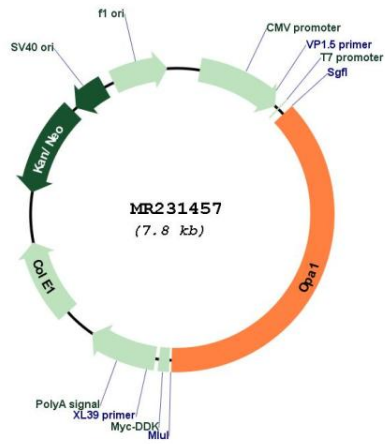


ACCN: NM\_001199177

ORF Size: 2934 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001199177.1</a> , <a href="#">NP_001186106.1</a>
<b>RefSeq Size:</b>	6002 bp
<b>RefSeq ORF:</b>	2937 bp
<b>Locus ID:</b>	74143
<b>Cytogenetics:</b>	16 20.65 cM
<b>MW:</b>	113.7 kDa
<b>Gene Summary:</b>	Dynamin-related GTPase that is essential for normal mitochondrial morphology by regulating the equilibrium between mitochondrial fusion and mitochondrial fission (PubMed:11847212, PubMed:24616225, PubMed:26785494, PubMed:28746876). Coexpression of isoform 1 with shorter alternative products is required for optimal activity in promoting mitochondrial fusion (By similarity). Binds lipid membranes enriched in negatively charged phospholipids, such as cardiolipin, and promotes membrane tubulation. The intrinsic GTPase activity is low, and is strongly increased by interaction with lipid membranes (By similarity). Plays a role in remodeling cristae and the release of cytochrome c during apoptosis (PubMed:16839884, PubMed:16839885). Proteolytic processing in response to intrinsic apoptotic signals may lead to disassembly of OPA1 oligomers and release of the caspase activator cytochrome C (CYCS) into the mitochondrial intermembrane space (PubMed:16839884, PubMed:16839885). Plays a role in mitochondrial genome maintenance (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR231457