

Product datasheet for **MR225663**

Opa1 (NM_133752) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Opa1 (NM_133752) 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:

>MR225663 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTGGCGAGCAGGTGCGGCCGGCTGGCCTGTGAAGTCTGCCAATCCTTAGTGAACACAGCTCTGGAA
 TACAAAGAAACGTACCGCTCCAAAACTCCATCTGGTTTCACGAAGTATTATCGTTCACATCATCCTGC
 CCTCAAGCTTCAAAGACCCCAACTAAGGACACCATTTCAGCAGTTCTCTTCTCTAACTCACCTTTTATTA
 CATAAATTGAACTTTCTCCAATTAATATGGCTACCAGCCCCGAGGAACCTTTGGCCAGCAAGGTTAG
 CTGCAAGACTCTTAAACTTCGATATATCATACTGGGATCTGCTGTTGGAGGTGGCTATACAGCCAAAA
 AACCTTCGATGAATGAAAGATATGATACCAGACCTTAGTACTATAAGTGGATTGTGCCTGACTTTATA
 TGGGAAATTGATGAGTATATTGATTTGGAGAAAATTAGAAAAGCCCTCCAGCTCAGAAGACCTTGCCA
 GTTTAGCTCCCGACTTGGACAAGATTACTGAGAGCCTCAGCTTGTGAAGGACTTCTTCACTGCAGGTTT
 ACCTGGAGAAACAGCATTTCGAGCAACAGATCATGGATCTGAAAGTGACAAGCATTACAGGAAGGTGCA
 GACAAAGAAAAGATTGACCAACTCAAGAAGAACTTCTGCATACTCAGTTAAAGTATCAGAGGATCTTGG
 AGCGCCTGGAAAAGGAGAACAAAGAGCTGAGGAAGCTGGTGTGTCAGAAGGACGACAAAGGCATCCACCA
 CAGGAAGCTCAAGAAATCTTTGATTGATATGTATTCTGAAGTCTTGATGTTCTTTCTGATTATGATGCC
 AGTTACAATACACAAGATCACCTACCACGGGTTGTTGGGTTGGAGATCAGAGTGTGGGAAAACAGTG
 TGCTGGAAATGATTGCTCAGGCCGGATCTCCCGAGAGGGTCCGGCGAGATGATGACACGCTCTCCAGT
 GAAGGTGACTCTCAGTGAAGGCCCTCACCATGTGGCCTTGTTAAAGATAGCTCTCGGAATTTGATCTC
 ACCAAGGAGGAAGATCTGCAGCATTAGACATGAAATCGAACTCCGAATGAGGAAAAATGTGAAAGAAG
 GTTGTACTGTTAGCCCCGAGACCATATCTCTAAATGTCAAAGGCCCTGGGCTCGAGAGGATGGTGTCTCG
 GGACTTGCCTGGTGTATCAACACTGTGACATCAGGCATGGCTCCCGACACAAAGGAAACTATTTTCAGT
 ATCAGCAAAGCTTACATGCAAGATCCTAACCCATCATCTGTGCATCCAAGACGGATCCGTAGATGCTG
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 CAAAGTAGACCTGGCAGAAAAAATGTAGCCAGTCCAAGCAGGATACAACAGATAATTGAAGGCAAGCTC
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 CTATAAGAGAGTATGAAGAGGAATTTTTTTCAGAATTCAAAAGTCTAAAGACAAGCATGCTAAAGGCACA
 CCAGGTCACCACGAGAAATCTCAGCCTTGCTGTGTGACTGCTTTTGGAAAATGGTTCGAGAGTCAAGT
 GAACAACAGGCTGATAGTTTTAAAGCCACGCGCTTAACTAGAGACGGAATGGAAGAATAACTACCCGC
 GCCTGCGAGAGCTCGACAGGAATGAACTCTTGAAGAAAGCTAAAAATGAGATCCTCGATGAGGTCATCAG
 TCTGAGCCAGGTCAGCCAAAGCACTGGGAGGAAATCCTGCAGCAATCCCTGTGGGAACGAGTGTCAACA
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 ACATCAAGCTTAAACAGTGGACTGACAAGCAGCTTCTAATAAAGCAGTCGAGGTTGCCTGGGAGACTCT
 ACAAGAGGAATTTTCCGCTTATGACAGAACCCAAAGGAAAGGAAACACGACGACATATTTGACAAACTT
 AAGGAGGCTGTGAAGGAGGAGAGTATCAAGCGGCAAGTGAACGACTTTCGGAGGATAGCTTGAGGG
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 CATGGAAGAGGCGCTTCAAGGTCGTCTCAAGGATCTGAAAATGCTATTGAAAACATGATTGGGCCAGAC
 TGGAAAAAGAGGTGGATGTACTGGAAGAATCGGACCCAAAGAGCAGTGTGTTTACAACGAAACCAAGAACG
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 AGAGGCATTTTATAGATTCTGAGCTGGAATGCAATGACGTGGTCTGTTTTGGCGAATACAGCGCATGCT
 CGCTACTGCCAATACATTAAGGCAGCAGCTTACAAACTGAAGTTAGGCGACTAGAGAAAAACGTT
 AAAGAGGTATTAGAAGATTTTGCAGAAGACGGTGAGAAGAAGTTAAATTGCTCACTGGCAAACGAGTTC
 AGCTGGCAGAAGATCTCAAGAAAGTTAGAGAAATCAAGAAAAGCTTGATGCTTTTATTGAAGCTCTTCA
 CCAGGAGAAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR225663 protein sequence
 Red=Cloning site Green=Tags(s)

MWRAGRAAVACEVCQSLVKHSSGIQRNVPLQKLHLVSRSIYRSHHPALKLQRPQLRTPFQQFSSLTHLSL
 HKLKLSPIKYGYQPRNFWPARLAARLLKLYIILGSVGGGYTAKKTFDEWKDMIPDLSDYKWIVPDFI
 WEIDEYIDLEKIRKALPSSEDLASLAPDLDKITESLSLLKDFFTAGSPGETAFRATDHGSESDKHRYKVS
 DKEKIDQLQEELLHTQLKYQRILERLEKENKELRKLVLQKDDKGIHHRKLLKSLIDMYSEVLDVLSYDA
 SYNTQDHLPRVVVVDQSQAGKTSVLEMI AQARIFPRGSGEMMTRSPVKVTLSEGPVHVALFKDSSREFDL
 TKEEDLAALRHEIELRMRKNVKEGCTVSPETISLNVKGPGLQRMVLDLPGVINTVTSGMAPDTKETIFS
 ISKAYMQPNPNAIILCIQDGSVDAERSIVTDLVSQMDPHGRRTIFVLTKVDLAEKNVASPSRIQQIIEGKL
 FPMKALGYFAVVTGKGNSSIEAIREYEEFFQNSKLLKTSMLKAHQVTRNLSLAVSDCFWKMVRESV
 EQQADSFKATRFNLETEWKNNYPRLRELDRELFEKAKNEILDEVISLSQVTPKHWEIILQQSLWERVST
 HVNIENIYLPAAQTMNSGTFNTTVDIKLKQWTDKQLPNKAVEVAVETLQEEFSRFMTEPKGKEHDDIFDKL
 KEAVKEESIKRHKWDF AEDSLRVIQHNALEDRSISDKQQWDAAIYFMEALQGRLLKDTENAIENMIGPD
 WKKRWMYWKNRTQEQC VHNETKNELEKMLKVNDHPAYLASDEITTVRKNLESRGVEVDP SLIKDTHQV
 YRRHFLKTALNHCNLCRRGFY YQRHFIDSELECNDVVLFWRIQRMLAITANTLRQQLTNTVEVRRLEKNV
 KEVLEDF AEDGEEKVLLTGKRVQLAEDLKKVREIQEKLDAFIEALHQEK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:

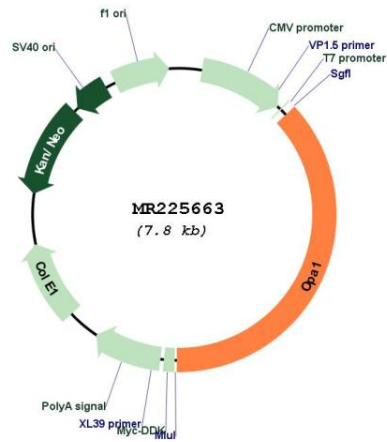


ACCN: NM_133752

ORF Size: 2883 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.
RefSeq:	NM_133752.1
RefSeq Size:	5948 bp
RefSeq ORF:	2883 bp
Locus ID:	74143
UniProt ID:	P58281
Cytogenetics:	16 20.65 cM
MW:	111.3 kDa
Gene Summary:	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 MR225663