

## Product datasheet for **SC314928**

### OPA1 (NM\_130831) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	OPA1 (NM_130831) Human Untagged Clone
Tag:	Tag Free
Symbol:	OPA1
Synonyms:	BERHS; largeG; MGM1; MTDPS14; NPG; NTG
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:**

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>OriGene ORF sequence for NM_130831 edited
ATGTGGCGACTACGTCGGGCCGCTGTGGCCTGTGAGGTCTGCCAGTCTTTAGTGAACAC
AGCTCTGGAATAAAAGGAAGTTTACCACTACAAAACTACATCTGGTTTCACGAAGCATT
TATCATTACATCATCTACCTAAAGCTTCAACGACCCCAATTAAGGACATCCTTTAG
CAGTTCTCTTCTGACAAACCTTCTTACGTAACCTGAAATTTCTCCAATTAATAT
GGCTACCAGCCTCGCAGGAATTTTTGGCCAGCAAGATTAGCTACGAGACTCTTAAACTT
CGCTATCTACTAGGATCGGCTGTTGGGGGTGGCTACACAGCCAAAAAGACTTTTGAT
CAGTGGAAAGATATGATACCGGACCTTAGTGAATATAAATGGATTGTGCCTGACATTGTG
TGGGAAATTGATGAGTATATCGATTTTGGTTCTCCGGAAGAAACGGCGTTTAGAGCAACA
GATCGTGGATCTGAAAGTGACAAGCATTTTAGAAAGGTGTGAGACAAAGAGAAAAATTGAC
CAACTTCAGGAAGAACTTCTGCACACTCAGTTGAAGTATCAGAGAATCTTGAACGATTA
GAAAAGGAGAACAAGAATTGAGAAAAATTAGTATTGCAGAAAGATGACAAAGGCATTTCAT
CATAGAAAGCTTAAGAAATCTTTGATTGACATGTATTCTGAAGTCTTGATGTTCTCTCT
GATTATGATGCCAGTTATAATACGCAAGATCATCTGCCACGGGTTGTTGTGGTTGGAGAT
CAGAGTGTGAAAGACTAGTGTGTTGAAATGATTGCCAAGCTCGAATATTCCAAGA
GGATCTGGGGAGATGATGACACGTTCTCCAGTTAAGGTGACTCTGAGTGAAGTCTCAC
CATGTGGCCCTATTTAAAGATAGTTCTCGGGAGTTTGATCTTACCAAAGAAGAAGATCTT
GCAGCATTAAAGACATGAAATAGAACTTCGAATGAGGAAAAATGTGAAAGAAGGCTGTACC
GTTAGCCCTGAGACCATATCCTTAAATGTAAAAGGCCCTGGACTACAGAGGATGGTGCTT
GTTGACTTACCAGGTGTGATTAATACTGTGACATCAGGCATGGCTCTGCACAAAGGAA
ACTATTTTCAGTATCAGCAAAGCTTACATGCAGAATCCTAATGCCATCATACTGTGATT
CAAGATGGATCTGTGGATGCTGAACGCAGTATTGTTACAGACTTGGTCAGTCAAATGGAC
CCTCATGGAAGGAGAACCATATTCGTTTTGACCAAAGTAGACTGCAGAGAAAAATGTA
GCCAGTCCAAGCAGGATTCAGCAGATAAATTGAAGGAAAGCTCTTCCAATGAAAGCTTTA
GGTATTTTGTGTTGTAAACAGGAAAAGGGAACAGCTCTGAAAGCATTGAAGCTATAAGA
GAATATGAAGAAGAGTTTTTTTTCAGAATTCAAAGCTCCTAAAGACAAGCATGCTAAAGGCA
CACCAAGTGACTACAAGAAATTTAAGCCTTGCAGTATCAGACTGCTTTTGGAAAAATGGTA
CGAGAGTCTGTTGAACAACAGGCTGATAGTTTCAAAGCAACACGTTTTAACCTTGAAACT
GAATGGAAGAATAACTATCCTCGCTGCGGGAACCTTGACCGGAATGAACTATTTGAAAAA
GCTAAAAATGAAATCCTTGATGAAGTTATCAGTCTGAGCCAGGTTACACCAAAACATTGG
GAGGAAATCCTTCAACAATCTTTGTGGGAAAGAGTATCAACTCATGTGATTGAAAACATC
TACCTTCCAGCTGCGCAGACCATGAATTCAGGAACTTTTAACACCACAGTGGATATCAAG
CTTAAACAGTGGACTGATAAACAACCTCCTAATAAAGCAGTAGAGGTTGCTTGGGAGACC
CTACAAGAAGAATTTTCCCGCTTATGACAGAACCAGGAAAGGAAAGAGCATGATGACATA
TTTGATAAACTTAAAGAGGCTGTTAAGGAAGAAAGTATTAAACGACACAAGTGGAAATGAC
TTTGCGGAGGACAGCTTGAGGGTTATTCAACACAATGCTTTGGAAGACCGATCCATATCT
GATAAACAGCAATGGGATGCAGCTATTTATTTTATGGAAGAGGCTCTGCAGGCTCGTCTC
AAGGATACTGAAAATGCAATTGAAAACATGGTGGGTCCAGACTGGAAAAAGAGGTGGTTA
TACTGGAAGAATCGGACCCAAGAACAGTGTGTTTACAATGAAACCAAGAATGAATTTGGAG
AAGATGTTGAAATGTAATGAGGAGCACCCAGCTTATCTTGAAGTGATGAAATAACCACA
GTCCGGAAGAACCTTGAATCCCGAGGAGTAGAAGTAGATCCAAGCTTGATTAAGGATACT
TGGCATCAAGTTTATAGAAGACATTTTTTAAAAACAGCTCTAAACCATTGTAACCTTTGT
CGAAGAGGTTTTTATTACTACCAAAGGCATTTTGTAGATTCTGAGTTGGAATGCAATGAT
GTGGTCTGTTTTGGCGTATACAGCGCATGCTTGCTATCACCGCAAACTTTAAGGCAA
CAACTTACAAATACTGAAGTTAGGCGATTAGAGAAAAATGTTAAAGAGGTATTGGAAGAT
TTTGCTGAAGATGGTGAAGAAGATTAATGCTTACTGGTAAACGCGTTCAACTGGCG
GAAGACCTCAAGAAAGTTAGAGAAATTCAGAAAAACTTGATGCTTTCATTGAAGCTCTT
CATCAGGAGAAATAA
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**Restriction Sites:**

Please inquire

**ACCN:**

NM\_130831

<b>Insert Size:</b>	6000 bp
<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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></p>
<b>OTI Annotation:</b>	The ORF of this clone has been fully sequenced and found to match to NM_130831.1. There is a SNP in the ORF.
<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_130831.1</a> , <a href="#">NP_570844.1</a>
<b>RefSeq Size:</b>	5756 bp
<b>RefSeq ORF:</b>	2775 bp
<b>Locus ID:</b>	4976
<b>UniProt ID:</b>	<a href="#">O60313</a>
<b>Cytogenetics:</b>	3q29
<b>Domains:</b>	dynamain

**Gene Summary:**

The protein encoded by this gene is a nuclear-encoded mitochondrial protein with similarity to dynamin-related GTPases. The encoded protein localizes to the inner mitochondrial membrane and helps regulate mitochondrial stability and energy output. This protein also sequesters cytochrome c. Mutations in this gene have been associated with optic atrophy type 1, which is a dominantly inherited optic neuropathy resulting in progressive loss of visual acuity, leading in many cases to legal blindness. [provided by RefSeq, Aug 2017]

Transcript Variant: This variant (2) is missing exon 4, compared to transcript variant 1. It however, maintains the same reading frame and encodes an isoform (2) of 924 aa. This variant is based on an alternate splice pattern characterized by Deletre et al (2001, PMID: 11810270), but the complete 5' to 3' exon combination is inferred and not supported at the time of review by a single long cDNA. Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.