

## Product datasheet for **RG211517**

### OPA1 (NM\_130837) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	OPA1 (NM_130837) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	OPA1
Synonyms:	BERHS; largeG; MGM1; MTDPS14; NPG; NTG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG211517 representing NM_130837 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTGGCGACTACGTCGGGCGCTGTGGCCTGTGAGGTCTGCCAGTCTTTAGTGAACACAGCTCTGGAA  
TAAAAGGAAGTTTACCACTACAAAACTACATCTGGTTTCACGAAGCATTATCATTACATCATCTAC  
CTTAAAGCTTCAACGACCCCAATTAAGGACATCCTTTACGAGTCTCTCTCTGACAAACCTTCTTTA  
CGTAAACTGAAATCTCTCCAATTAATATGGCTACCAGCCTCGCAGGAATTTTGGCCAGCAAGATTAG  
CTACGAGACTCTTAAACTTCGCTATCTCATACTAGGATCGGCTGTTGGGGTGGCTACACAGCCAAAA  
GACTTTTGATCAGTGGAAAGATATGATACCGACCTTAGTGAATATAAATGGATTGTGCCTGACATTGTG  
TGGGAAATTGATGAGTATATCGATTTTGGAAAATTAGAAAAGCCCTTCTAATTCAGAAGACCTTGTA  
AGTTAGCACCAGACTTTGACAAGATTGTTGAAAGCCTTAGCTTATTGAAGGACTTTTTACCTCAGGTCA  
CAAATTGGTTAGTGAAGTCATAGGAGCTTCTGACCTACTTCTCTTGTAGGTTCTCCGGAAGAAACGGCG  
TTTAGAGCAACAGATCGTGGATCTGAAAGTGACAAGCATTTTAGAAAAGGCTGCTTGGTGAAGCTCATT  
TCTTACAACAACAAATTCAGAGCATGAAGAGGAAGCGCGCAGAGCCGCTGGCCAATATAGCAGGAGCTA  
TGCCCAACAGAAGCGCAAGGTGTCAGACAAAGAGAAAAATTGACCAACTTCAGGAAGAATTCTGCACACT  
CAGTTGAAGTATCAGAGAATCTTGAACGATTAGAAAAGGAGAACAAGAATTGAGAAAAATTAGTATTGC  
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TGATGTTCTCTGATTATGATGCCAGTTATAATACGCAAGATCATCTGCCACGGTTGTTGTGGTTGGA  
GATCAGAGTGCTGAAAGACTAGTGTGTTGAAAATGATTGCCAAGCTCGAATATCCCAAGAGGATCTG  
GGGAGATGATGACACGTTCTCCAGTTAAGGTGACTCTGAGTGAAGGTCCTCACCATTGTGGCCCTATTTAA  
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TGACACAAAGGAACTATTTTCAGTATCAGCAAAGCTTACATGCAGAATCCTAATGCCATCATACTGTG



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ATCAAGATGGATCTGTGGATGCTGAACGCAGTATTGTTACAGACTTGGTCAGTCAAATGGACCCTCATG  
 GAAGGAGAACCATATTCGTTTTGACCAAAGTAGACCTGGCAGAGAAAAATGTAGCCAGTCCAAGCAGGAT  
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 AGTTAGGCGATTAGAGAAAAATGTTAAAGAGGTATTGGAAGATTTTGTGGAAGATGGTGAGAAGAAGATT  
 AAATTGCTTACTGGTAAACGCGTTCAACTGGCGGAAGACCTCAAGAAAGTTAGAGAAATTAAGAAAAAC  
 TTGATGCTTTCATTGAAGCTCTTCATCAGGAGAAA

AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG211517 representing NM\_130837  
 Red=Cloning site Green=Tags(s)

MWRLRRAAVACEVCQSLVKHSSGIKGSPLQKLHLVSRSIYHSHHPTLKLQRPQLRTSFQQFSSLTNLPL  
 RKLKFSPIKYGYQPRRNFWPALRLLKRLYLILGSAVGGGYTAKKTFDQWKDMIPDLSEYKWIVPDIV  
 WEIDEYIDFEKIRKALPNSEDLVKLAPDFDKIVESLSLLKDFFTSGHKL VSEVIGASDLLLLLSPEETA  
 FRATDRGSESDKHFRKGLLGELILLQQIQEHEEEARRAAGQYSTSYAQQKRKVSDEKEIDQLQEELLHT  
 QLKYQRILERLEKENKELRKLVLQKDDGIHHRKLLKSLIDMYSEVLDVLSYDASYNTQDHLPRVVVVG  
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 TEWKNNYPRLRELDRELFEKAKNEILDEVISLSQVTPKHWEIILQQSLWERVSTHVIENIYLPAAQTMN  
 SGTFTNTVDIKLKQWTDKQLPNKAVEVAWETLQEEFSRFMTEPKGKEHDDIFDKLKEAVKEESIKRHKWN  
 DFAEDSLRVIQHNALEDRSISDKQQWDAAIYFMEALQARLKDTENAIENMVGPDWKKRWLYWKNRTQEQ  
 CVHNETKNELEKMLKCNEEHPAYLASDEITTVRKNLESRGVEVDP SLIKDTWHQVYRRHFLKALNHCNL  
 CRRGFYYYQRHFVDSLELCNDVLLFWRIQRMLAITANTLRQQLTNTVEVRRLEKNVKEVLEDF AEDGEKKI  
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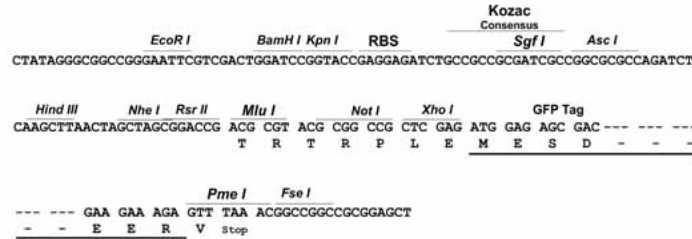
SGPTRRRLE - GFP Tag - V

**Restriction Sites:**

Sgfl-RsrII

Cloning Scheme:

Cloning sites used for ORF Shuttling:



ACCN: NM\_130837

ORF Size: 3045 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.

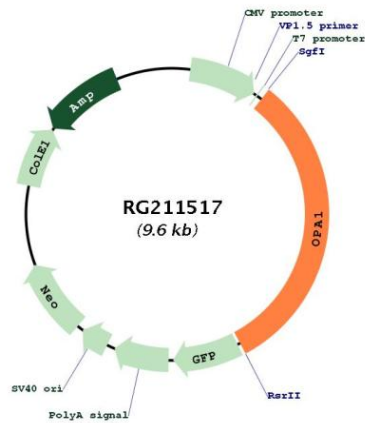
RefSeq: [NM\\_130837.1](#), [NP\\_570850.1](#)

RefSeq Size: 6029 bp

**RefSeq ORF:** 3048 bp  
**Locus ID:** 4976  
**UniProt ID:** [O60313](#)  
**Cytogenetics:** 3q29  
**Domains:** dynamin

**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]

### Product images:



Circular map for RG211517