

## Product datasheet for **MG209132**

### Optn (NM\_181848) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Optn (NM_181848) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Optn
Synonyms:	4930441O07Rik; FIP2; HYPL; NRP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG209132 representing NM\_181848  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTCCCATCAACCTCTGAGCTGCCTGACTGAGAAGGGGACAGCCCTTGTGAGACCCAGGAAATGGAC  
 CCTCCAATATGGTTCACCCAGCCTGGACACATTCACCCCTGAGGAGCTGCTGCAGCAAATGAAGGAACT  
 CCTGGTTGAGAACCACAGCTGAAAAGAAGCCATGAAGCTAAATAATCAAGCTATGAAAGGGCGATTTGAG  
 GAGCTGTCCGCTGGACAGAGAAGCAGAAGGAAGAGCGCCTGTTGTTGAGATGCAAAGCAAAGAGGTTA  
 AGGAGCGCCTTAAGGCCCTGACTCATGAAAATGAGAGGCTGAAGGAAGAGCTTGGAAAATCAAAGAGAA  
 ATCAGAAAAGCCATTGGAAGACCTCACAGGTGGCTACAGGTATCCAGAGCCTTGAGAGGAAAGTGGAG  
 AAGCTGAAGACCCAGGTGGAGCAGGAAGTGGAGCATCTGAAGTCCAGGTGATGCGCCTTCGGGCTGAAA  
 AGGCAGACCTGTGGGCATCGTCTCAGAACTGCAGCTCAAACCTCACTCCGGCGGCTCCTCGGAAGACTC  
 TTCGTTGAGATCAGGATGACCGAAGGAGAGACTGAAGGGGCAATGAAGGAGATGAAGAAGTCCCTACA  
 CCCACAAGAACAGACCCCATCAGCTTGAGCAACTGTACAGAGGATGCCAGGAGTTGTGCGGAGTTTGAAG  
 AACTGACTGTGAGCCAGCTTCTGCTTTGCCTAAGGGAAGGAAACAAAAGGTGGAGAGACTTGAAGTCGC  
 CCTCAGAGAAGCCAAAGAAAGAAATTTAGATTTTAAAAGAAAGCAAATGGCCATTTCTTCTACTGAGAAG  
 CAGACAGCGAGGAGAGCAGACAGAGAGAAGGAGGACAAAGGCCAAGAGAGTGTGGAAAGCGAAGTGGAAA  
 CACTGAGCATTCAAGTGACCTCTCTGTTAAGGAGCTTCAAGAGGCACACAAAACTCAGTGAGGCTGA  
 GCTGATGAAGAAGAGACTTCAAGAAAAGTGTGAGGCTCTGGAGAGGAAGAAGTCTGCAACACCATCAGAG  
 CTGAATGAAAAGCAAGAGCTCGTTTACAGTAACAAGAAGTTAGAGCTGCAGGTGGAGAGCATGCGCTCCG  
 AAATCAAGATGGAGCAGGCCAAGACAGAGGAGGAGAAGTCCAGGTTAGCCACTCTGCAGGCAACTCACA  
 CAAGCTCCTTCAAGAACATAATAAGGCCTGAAAACAATTGAAGAATAACCAAGCAACAGGCAGAAAAG  
 GTGGACAAGATGTTGCTGCAGGAGCTCAGCGAGAAGCTGGAGCTGGCAGAGCAGGCTCTGGCATCCAAAC  
 AGCTCCAGATGGATGAGATGAAGCAGACGCTCGCTAAGCAGGAGGAAGACCTGGAGACCATGGCCGCTCT  
 CAGGGCTCAGATGGAGGTGACTGCTCAGATTTTACGCTGAGAGAGCAGCAAGAGAGAAGATTCATGAA  
 GAAAAGGAGCAGCTGGCCTTGCAGCTCGGATTTTGTGAAAAGAGAACAATGACATTGAAGAGGGAGGCA  
 GTAGACAGTCCCTGATGGAAATGCAGTCCGACACGGGGCAAGAACCAGTGACTCTGACCAGCAGACTTA  
 CCTGTTTCAAAGAGGAGCCGAGGACAGGAGCTGGCAGCACGGGCAGCAGCCTCGCAGTATCCGATTAC  
 TCCTGCCCAAGTGGGGAGGTCTGCCGGACATCGACACGCTTCAGATCCATGTGATGGACTGCATCA  
 TT

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG209132 representing NM\_181848  
 Red=Cloning site Green=Tags(s)

MSHQPLSCLTEKGDSPCETPGNGPSNMVHPSLDTFTPEELLQQMKELLVENHQLKEAMKLNQAMKGRFE  
 ELSAWTEKQKEERLLFEMQSKEVKERLKALTHENERLKEELGKFKEKSEKPLEDLTGGYRYPRALEEEVE  
 KLKTQVEQEVEHLKIQVMRLRAEKADLLGIVSELQLKLNSGSSSEDSFVEIRMTEGETEGAMKEMKNCPT  
 PTRTDPISLSNCTEDARSCAEFEELTVSQQLLCLREGNQKVERLEVALREAKERISDFEKKANGHSSTEK  
 QTARRADREKEDKGQESVGSEVETLSIQVTSLFKELQEHTKLSEAELMKKRLQEKQALERKNSATPSE  
 LNEKQELVYSNKKLELQVESMRSEIKMEQAKTEEEKSRLATLQATHNKLLQEHNKALKTIEELTKQQA  
 VDKMLLQELSEKLELAEQALASKQLQMDQEMKQTLAKQEEDLETMAVLRQMEVYCSDFHAERAAREKIHE  
 EKEQLALQLAILLKENNDIEEGSRQSLMEMQCRHGARTSDSDQQTLYLFRGAEDRSWQHGGQPRSIPIH  
 SCPKCGEVLDPIDTLQIHVMDCII

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



ACCN: NM\_181848

ORF Size: 1752 bp

OTI Disclaimer: 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 [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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.

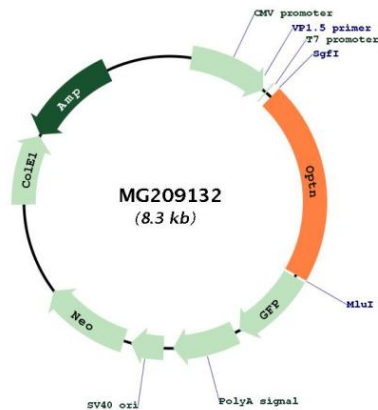
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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\\_181848.5](#)  
**RefSeq Size:** 2413 bp  
**RefSeq ORF:** 1755 bp  
**Locus ID:** 71648  
**UniProt ID:** [Q8K3K8](#)  
**Cytogenetics:** 2 3.15 cM

**Gene Summary:** Plays an important role in the maintenance of the Golgi complex, in membrane trafficking, in exocytosis, through its interaction with myosin VI and Rab8. Links myosin VI to the Golgi complex and plays an important role in Golgi ribbon formation. Plays a role in the activation of innate immune response during viral infection. Mechanistically, recruits TBK1 at the Golgi apparatus, promoting its trans-phosphorylation after RLR or TLR3 stimulation. In turn, activated TBK1 phosphorylates its downstream partner IRF3 to produce IFN-beta. Plays a neuroprotective role in the eye and optic nerve. May act by regulating membrane trafficking and cellular morphogenesis via a complex that contains Rab8 and hungtingtin (HD). Mediates the interaction of Rab8 with the probable GTPase-activating protein TBC1D17 during Rab8-mediated endocytic trafficking, such as of transferrin receptor (TFRC/TfR); regulates Rab8 recruitment to tubules emanating from the endocytic recycling compartment. Autophagy receptor that interacts directly with both the cargo to become degraded and an autophagy modifier of the MAP1 LC3 family; targets ubiquitin-coated bacteria (xenophagy), such as cytoplasmic Salmonella enterica, and appears to function in the same pathway as SQSTM1 and CALCOCO2/NDP52. May constitute a cellular target for adenovirus E3 14.7, an inhibitor of TNF-alpha functions, thereby affecting cell death.[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MG209132