

Product datasheet for **MC219312**

Optn (NM_181848) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Optn (NM_181848) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Optn
Synonyms:	4930441O07Rik; FIP2; HYPL; NRP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC219312 representing NM_181848
 Red=Cloning site Blue=ORF

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGC**

ATGTCCCATCAACCTCTGAGCTGCCTGACTGAGAAGGGGACAGCCCTTGTGAGACCCAGGAAATGGAC
 CCTCCAATATGGTTCACCCAGCCTGGACACATTCACCCCTGAGGAGCTGCTGCAGCAAATGAAGGAACT
 CCTGGTTGAGAACCACAGCTGAAAGAAGCCATGAAGCTAAATAATCAAGCTATGAAAGGCGATTGAG
 GAGCTGTCCGCTGGACAGAGAAGCAGAAGGAAGAGCGCCTGTTGTTGAGATGCAAAGCAAAGAGGTTA
 AGGAGCGCCTTAAGGCCCTGACTCATGAAAATGAGAGGCTGAAGGAAGAGCTTGGAAAATCAAAGAGAA
 ATCAGAAAAGCCATTGGAAGACCTCACAGGTGGCTACAGGTATCCAGAGCCTTGAGAGGAGGAAGTGGAG
 AAGCTGAAGACCCAGGTGGAGCAGGAAGTGGAGCATCTGAAGATCCAGGTGATGCGCCTTCGGGCTGAAA
 AGGCAGACCTGTGGGCATCGTCTCAGAACTGCAGCTCAAACCTCAACTCCGGCGGCTCCTCGGAAGACTC
 TTTCGTTGAGATCAGGATGACCGAAGGAGAGACTGAAGGGGCAATGAAGGAGATGAAGAAGTCCCTACA
 CCCACAAGAACAGACCCCATCAGCTTGAGCAACTGTACAGAGGATGCCAGGAGTTGTGCGGAGTTTGAAG
 AACTGACTGTGAGCCAGCTTCTGCTTTGCCTAAGGGAAGGAAACAAAAGGTGGAGAGACTTGAAGTCGC
 CCTCAGAGAAGCCAAAGAAAGAATTTAGATTTTGAAGAAAGCAAATGGCCATTCTTCTACTGAGAAG
 CAGACAGCGAGGAGAGCAGACAGAGAGAAGGAGGACAAAGGCCAAGAGAGTGTGGAAGCGAAGTGGAAA
 CACTGAGCATTCAAGTGACCTCTCTGTTAAGGAGCTTCAAGAGGCACACAAAACTCAGTGAGGCTGA
 GCTGATGAAGAAGAGACTTCAAGAAAAGTGTGAGGCTCTGGAGAGGAAGAACTCTGCAACACCATCAGAG
 CTGAATGAAAAGCAAGAGCTCGTTTACAGTAACAAGAAGTTAGAGCTGCAGGTGGAGAGCATGCGCTCCG
 AAATCAAGATGGAGCAGGCCAAGACAGAGGAGGAGAAGTCCAGGTTAGCCACTCTGCAGGCAACTCACAA
 CAAGCTCCTTCAAGAACATAATAAGGCACTGAAAACAATTGAAGAATAACCAAGCAACAGGCAGAAAAAG
 GTGGACAAGATGTTGCTGCAGGAGCTCAGCGAGAAGCTGGAGCTGGCAGAGCAGGCTCTGGCATCCAAAC
 AGCTCCAGATGGATGAGATGAAGCAGACGCTCGCTAAGCAGGAGGAAGACCTGGAGACCATGGCCGTCT
 CAGGGCTCAGATGGAGGTGTACTGCTCAGATTTTACGCTGAGAGAGCAGCAAGAGAGAAGATTCATGAA
 GAAAAGGAGCAGCTGGCCTTGAGCTCGCGATTTTGTGAAAGAGAACAATGACATTGAAGAGGGAGGCA
 GTAGACAGTCCCTGATGGAAATGCAGTGCCGACACGGGGCAAGAACCAGTGACTCTGACCAGCAGACTTA
 CCTGTTTCAAAGAGGAGCCGAGGACAGGAGCTGGCAGCACGGGCAGCAGCCTCGCAGTATTCGATTAC
 TCCTGCCCAAGTGCGGAGAGGTCTGCCGACATCGACACGCTTCAGATCCATGTGATGGACTGCATCA
 TTTGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_181848
Insert Size: 1755 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 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](#)

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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [BC061185](#), [AAH61185](#)

RefSeq Size: 2443 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 huntingtin (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]

Transcript Variant: This variant (2) differs in the 3' UTR compared to variant 1. Variants 1 and 2 both encode the same protein.