

Product datasheet for **MR209132**

Optn (NM_181848) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Optn (NM_181848) Mouse Tagged ORF Clone
Tag:	Myc-DDK
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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ORF Nucleotide Sequence:

>MR209132 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCCCATCAACCTCTGAGCTGCCTGACTGAGAAGGGGACAGCCCTTGTGAGACCCAGGAAATGGAC
 CCTCCAATATGGTTCACCCAGCCTGGACACATTCACCCCTGAGGAGCTGCTGCAGCAAATGAAGGAACT
 CCTGGTTGAGAACCACCGCTGAAAAGAAGCCATGAAGCTAAATAATCAAGCTATGAAAGGGCGATTTGAG
 GAGCTGTCCGCTGGACAGAGAAGCAGAAGGAAGAGCGCCTGTTGTTGAGATGCAAAGCAAAGAGGTTA
 AGGAGCGCCTTAAGGCCCTGACTCATGAAAATGAGAGGCTGAAGGAAGAGCTTGGAAAATCAAAGAGAA
 ATCAGAAAAGCCATTGGAAGACCTCACAGGTGGCTACAGGTATCCAGAGCCTTGGAGGAGGAAGTGGAG
 AAGCTGAAGACCCAGGTGGAGCAGGAAGTGGAGCATCTGAAGATCCAGGTGATGCGCCTTCGGGCTGAAA
 AGGCAGACCTGTGGGCATCGTCTCAGAACTGCAGCTCAAACCTCACTCCGGCGGCTCCTCGGAAGACTC
 TTCGTTGAGATCAGGATGACCGAAGGAGAGACTGAAGGGGCAATGAAGGAGATGAAGAAGTCCCTACA
 CCCACAAGAACAGACCCCATCAGCTTGAGCAACTGTACAGAGGATGCCAGGAGTTGTGCGGAGTTTGAAG
 AACTGACTGTGAGCCAGCTTCTGCTTTGCCTAAGGGAAGGAAACCAAAAGGTGGAGAGACTTGAAGTCGC
 CCTCAGAGAAGCCAAAGAAAGAAATTTAGATTTTGAAGAAAGCAAATGGCCATTTCTTCTACTGAGAAG
 CAGACAGCGAGGAGAGCAGACAGAGAGAAGGAGGACAAAGGCCAAGAGAGTGTGGAAAGCGAAGTGGAAA
 CACTGAGCATTCAAGTGACCTCTCTGTTAAGGAGCTTCAAGAGGCACACAAAACTCAGTGAGGCTGA
 GCTGATGAAGAAGAGACTTCAAGAAAAGTGTGAGGCTCTGGAGAGGAAGAACTCTGCAACACCATCAGAG
 CTGAATGAAAAGCAAGAGCTCGTTTACAGTAACAAGAAGTTAGAGCTGCAGGTGGAGGATCGCCTCCG
 AAATCAAGATGGAGCAGGCCAAGACAGAGGAGGAGAAGTCCAGGTTAGCCACTCTGCAGGCACTACAA
 CAAGCTCCTTCAAGAACATAATAAGGCACTGAAAACAATTGAAGAACTAACCAAGCAACAGGCAGAAAAG
 GTGGACAAGATGTTGCTGCAGGAGCTCAGCGAGAAGCTGGAGCTGGCAGAGCAGGCTCTGGCATCCAAAC
 AGCTCCAGATGGATGAGATGAAGCAGACGCTCGCTAAGCAGGAGGAAGACCTGGAGACCATGGCCGCTCT
 CAGGGCTCAGATGGAGGTGACTGCTCAGATTTTACGCTGAGAGAGCAGCAAGAGAGAAGATTCATGAA
 GAAAAGGAGCAGCTGGCCTTGCAGCTCGGATTTTGTGAAAGAGAACAATGACATTGAAGAGGGAGGCA
 GTAGACAGTCCCTGATGGAAATGCAGTCCGACACGGGGCAAGAACCAGTGACTCTGACCAGCAGACTTA
 CCTGTTTCAAAGAGGAGCCGAGGACAGGAGCTGGCAGCACGGGCAGCAGCCTCGCAGTATCCGATTCAC
 TCCTGCCCAAGTCCGAGAGGTCTGCCGGACATCGACACGCTTCAGATCCATGTGATGGACTGCATCA
 TT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR209132 protein sequence
 Red=Cloning site Green=Tags(s)

MSHQPLSCLTEKGDSPCETPGNGPSNMVHPSLDFTPEELLQQMKELLVENHQLKEAMKLNQAMKGRFE
 ELSAWTEKQKEERLLFEMQSKEVKERLKALTHENERLKEELGKFKEKSEKPLEDLTGGYRYPRALEEEVE
 KLKTQVEQEVEHLKIQVMRLRAEKADLLGIVSELQLKLNSSGSSSEDSFVEIRMTEGETEGAMKEMKNCPT
 PTRTDPISLSNCTEDARSCAEFEELTVSQLLLCLREGNQKVERLEVALREAKERISDFEKKANGHSSTEK
 QTARRADREKEDKQESVSEVETLSIQVTSLFKELQEATKLSEAELMKKRLQEKQALERKNSATPSE
 LNEKQELVYSNKKLELQVESMRSEIKMEQAKTEEEKSRLATLQATHNKLLQEHNKALKTIEELTKQQAQEK
 VDKMLLQELSEKLELAEQALASKQLQMDMKQTLAKQEEDLETMAVLRQMEVYCSDFHAERAAREKIHE
 EKEQLALQLAILKENNDIEEGGSRQSLMEMQCRHGARTSDSDQQTYLFRGAEDRSWQHGGQPRSPPIH
 SCPKCGEVLDPIDTLQIHVMDCII

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_181848

ORF 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](#)

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).

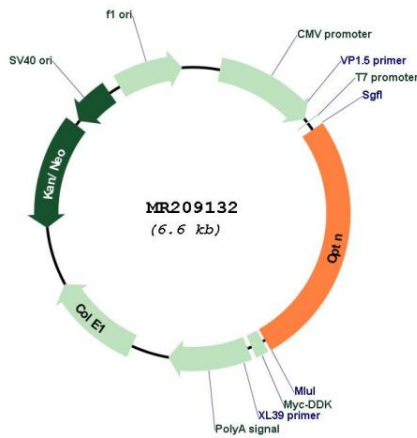
- Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid 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_181848.3](#)

RefSeq Size: 2413 bp
RefSeq ORF: 1755 bp
Locus ID: 71648
UniProt ID: [Q8K3K8](#)
Cytogenetics: 2 3.15 cM
MW: 67 kDa

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]

Product images:



Circular map for MR209132