

## Product datasheet for **RG209141**

### Munc 13 4 (UNC13D) (NM\_199242) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Munc 13 4 (UNC13D) (NM_199242) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Munc 13 4
Synonyms:	FHL3; HLH3; HPLH3; Munc13-4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG209141 representing NM_199242 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCCGATCGCC

ATGGCGACTCCTCTCCATCCGAGCAGCGCCCTCCCTTCTTGCGCCAGGCCATCAAGATAAGGCGCCGCAGAGTCAGAGATCTACAGGATCCCCGCCCCAAATGGCCCCGAGATCCAGCCTCCATCCCACCACTCTCCCCGAGCAGCGGGCCCTGCTCTACGAGGACGCACTCTACACTGTCTGCACCGCTGGGTATCCTGAGCCCAACCATGTGACGGAGGCCCTCTGAGCTGCTGCGATACCTGCAGGAGGCCCTCCACGTGGAGCCCGAGGAGCACCAGCAGACTGCAGCGGGTCAGGGAGCTTGAGAAGCCAATATTTTGTCTGAAGGCAACAGTGAACAGGCCAAGGGCATTCTGGGCAAAGATGTCAAGTGGGTTTCAGCGACCCCTACTGCCTGCTGGGCATTGAGCAGGGGGTAGGTGTGCCAGGGGGCAGCCCCGGTCCCGGCATCGGCAGAAGGCTGTGGTGAGGCACACCATCCCCGAGGAGGAGACCCACCGCAGCAGGTCATACCCAGACACTCAACCCCGTCTGGGACGAGACTTCATCTGGAGTTTGAGGACATACCAATGCGAGCTTTCATCTGGACATGTGGGACCTGGACACTGTGAGTCTGTCCGACAGAAGCTTGGGGAGCTACGGATCTGCATGGGCTTCGAGGATCTTTAAAGAGGGCCGGAAGGACAAAGGCCAGGACGACTTCTGGGAACTGGTCTGAGGCTGCAGGACCTGCCTGCCGAGAGGACCAAGTGGTACCCCTGGAACCCGCACTGAGACCTACCCAGACCGAGGCCAGTGCCACCTCCAGTCCAACTCATCCATAAGCGGAGAGCCACTTCGGCCAGCCGCTCGCAGCCGAGCTACACCGTGCACCTCCACTCCTGCAGCAGCTTGTGTCCACGAGGTCACCCAGCAGGCGGGAAGCACCTCTGGGACGGGTGCTGAGTCCCCAGGCTGCCACCGTCTCTTTCTGCACGCCACACAGAAGGACCTATCCGACTTCCACCACTCCATGGCGCAGTGGCTGGCCTACAGCCGCTCTACCAGAGCCTGGAGTTCCCCAGCAGCTGCCTCCTGCACCATCACCAGCATCGAGTACCAGTGGATCCAGGGTCGGCTCAAGGCAGAACAGCAGGAGGAGCTGGCCGCTCATTACAGTCCCTGCTGACCTACGGCCTCTCCCTCATCCGGAGGTTCCGCTCTGTCTTCCCCCTCTGTCTCGGACTCCCAGCCGGCTGCAGTCTTCTCAGGGTCTGGTACAGATGTGCAAGATGAAGGCCCTTGGGAACTGTGCCAACACCCGCCATTGCCCCAGCTGGTACTGAGGCCCTGCAGACTGCCACCACATGAAATGGTTCCACTGAAGCAGCAGCACCATCAACCCATGGTGCAGGGCATCCCGAGGCAGGCAAGGCC



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TTGCTGGGCTGGTACAGGATGTCATTGGCGACCTGCACCAGTGCCAGCGCACATGGGACAAGATCTTCC  
 ACAATACCCTCAAGATCCACCTCTTCTCCATGGCTTTCGGGAGCTGCAGTGGCTGGTGGCCAAGCGGT  
 GCAGGACCACACGACGGTTGTGGGTGATGTAGTGTCCCCAGAGATGGGCGAGAGTCTGTTCCAGCTCTAC  
 ATCAGCCTCAAGGAGCTCTGCCAGCTGCGCATGAGCTCCTCAGAGAGGGATGGAGTCTGGCCCTGGATA  
 ATTTCCACCGCTGGTCCAGCCGGCCATCCCTCCTGGCTGCAGAAGACGTACAACGAGGCCCTGGCGCG  
 GGTGCAGCGCGCTGTGCAGATGGATGAGTGGTGGCTGGTGAAGTGAACAGCAAGCACAGCACATCAGCG  
 GTGGCTATCCACCTGCTTGGCCAGATCAGCCACACTGCCCGCAGCTGGACTGGCAGCCAGAGG  
 AGGCTTTCATGATTACCGTCAAGTTTGTGGAGGACACTGTGCGCTGGCCCTGGTGTACTGCAGCCTTAT  
 AAAGGCCCGGGCCGCGAGCTCTCTCAGGCCAGAAGGACCAAGGCCAGGCGAGCCAAATGCTGTGTGTG  
 GTGGTGAATGACATGGAGCAGCTGCGGCTGGTGTGCGCAAGTTGCCCGCCAGCTGGCATGGGAGGCC  
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 CGCGCTGGCCGGCTGGCCATGAGATCCGCACTGGCGTCCGACCCTGGCCGAGCAGTTGGAGTGGGC  
 ATCGCAAAGCACATCCAGAACTGGTGGCGTCAGGGAGTCTGCTCCTGCCTGAGGATGCCATTCTGCCCC  
 TGATGAAGTTCTGGAGTGGAGCTTGTCTACATGAACACCAACTGGTGCAGGAGAAGTTCAGCAGCCT  
 CCTGACCTGCTCTGGACCCACACACTCACAGTGTGGTGGAGGGCGCCCTCCAGCGCAGCTCATCC  
 CTGGCTTCCAACAGGCTGAAGATTGCCCTGCAGAACCTGGAGATCTGCTTCCACGCTGAGGGCTGTGGCC  
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 CAGCCGGAACTCATCCGGAAGTACTTCTGCAGCCGAATCCAGCAGCAGGCGAGAAACCACCTCTGAGGAG  
 CTGGGGCTGTGACAGTCAAGGCCTCTACCGCCTCTGAGCAGAAGCTGCGTGTGGAGCTGCTCAGCG  
 CCTCCAGCCTGCTGCCCTGGACTCCAATGGCTCCAGCGACCCCTTTGTCCAGCTGACCTGGAGCCAG  
 GCATGAGTTCCCTGAGCTGGCCGCCGGGAGACCCAGAAGCACAAGAAGGACCTTACCCATTGTTTGTG  
 GAGACCTTGAATCTGGTGCCTGCTGAGCCGTGCCCAAGGCTGGGGCATGCCTCTGCTCACCCTGC  
 TGGACTACGACACGCTGGGGCCGACGACTGGAAGGCGAGGCCTTCTGCCGCTGCGTGAAGTGGCCGG  
 GCTGAGTGGCTCTGAGGAGCCTGGTGGAGTGCCTCAGACCCGCTGCCCTCACGTACCCCGCACCCAAAC  
 GGGGACCAATCCTGCAGCTGCTGGAGGCGGGAAGGTTGACCGAGAAGCCAGGTCTTTGTGAGGCTGC  
 GCGGCACCGGCCAAGCAGGCCTCCAGCATGCCTTGCAGCCGGCACCG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG209141 representing NM\_199242  
 Red=Cloning site Green=Tags(s)

MATLLSHPQRPFLRQAIRRRRVRDLQDPPQMAPEIQPPSHHFSPEQRALLYEDALYTVLHRLGHP  
 EPNHVTEASELLRYLQEAHVPEPEEHQQLQRVRELEKPIFKLKVQKQAKGILGKDVSGFSDPYCLLGI  
 EQGVGVPGGSPGSRHRQKAVVRHTIPEEETHRTQVITQTLNPVWDETFILFEDITNASFHLDMWDLDTV  
 ESVRQKLGELTDLHGLRRIFKEARKDKQDDFLGNVLRQLDLRCREDQWYPLEPRTETYPDRGQCHLQF  
 QLIHKRRATSASRSQPSYTVHLHLLQQLVSHEVTQHEAGSTSWDGSLSPOAATVFLHATQKDLSDFHQS  
 MAQWLAYSRLYQSLEFPSSCLLHPITSIEYQWIQGRKAEQQEELAASFSSLLTYGLSLIRRFRSVFPLS  
 VSDSPARLQSLLRVLRVQMKMKAFFGELCPNTAPLPQLVTEALQTGTTEWFHLKQHHQPMVQGIPEAGKA  
 LLGLVQDVIQDLHQCQRTWDKIFHNTLKIHLFSMAFREQLWLVAKRVDHTTVVGDVVSPEMGESEFLQY  
 ISLKELCQLRMSSSERDGLALDNFHRWFQPAIPSWLQKTYNEALARVQRAVQMDLVLPLGELTKHSTSA  
 VDLSTCFQAISHTARQLDWPDEEAFMITVKFVEDTCRLALVYCSLIKARARELSSGQKQDQQAANMLCV  
 VVNDMEQLRLVIGKLPALQAWALEQVRGAVLEQGQLQNTLHAQLQSALAGLGHEIRTGVRTLAEQLEVG  
 IAKHIQKLVGVRESVLPEDAILPLMKFLEVELCYMNTNLVQENFSSLLTLLWHTLTVLVEAASQRSS  
 LASNRLKIALQNLICFHAEGCGLPPKALHTATFQALQRDELQAASSRELIRKYFCRIQQQAETTSEE  
 LGAVTVKASYRASEQKLRVELLSASSLLPLDSNGSSDPFVQLTLEPRHEFPPELAARETQKHKKDLHPLFD  
 ETFEFLVPAEPCRKAGACLLLVLDYDTLGADDLEGEAFPLPREVPGLSGSEEPGEVPTRLPLTYPAPN  
 GDPILQLLEGRKGDREAQVFRLLRRHRAKQASQHALRPAP

TRTRPLE – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



ACCN: NM\_199242

ORF Size: 3270 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\\_199242.3](#)

RefSeq Size: 4406 bp

RefSeq ORF: 3273 bp

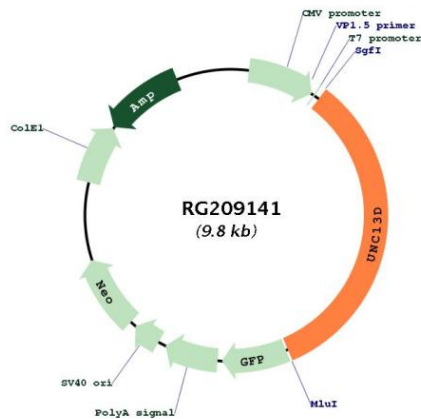
Locus ID: 201294

UniProt ID: [Q70J99](#)

Cytogenetics: 17q25.1

**Gene Summary:** This gene encodes a protein that is a member of the UNC13 family, containing similar domain structure as other family members but lacking an N-terminal phorbol ester-binding C1 domain present in other Munc13 proteins. The protein appears to play a role in vesicle maturation during exocytosis and is involved in regulation of cytolitic granules secretion. Mutations in this gene are associated with familial hemophagocytic lymphohistiocytosis type 3, a genetically heterogeneous, rare autosomal recessive disorder. [provided by RefSeq, Jul 2008]

### Product images:



Circular map for RG209141