

Product datasheet for **MC222348**

Gramd1b (NM_172768) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gramd1b (NM_172768) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Gramd1b
Synonyms:	3222402H23; A930008A22Rik; A1593249; mKIAA1201
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC222348 representing NM_172768
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCGGCGCCAACATGATGGAGAACCTGCAGCTGCCGCCCTGCAGGTGCCAGAACCTCAGGGCGCAC
 CCGAGGGCAGCGGGTGTGGTCCAGCTCGTCCACCCACGCTTCGCCCGCGCGCTTTAAGATGCGCCG
 GATGAAGAACGTGCAGGAGCAGAGCCTGGAGGCGGGTGGTAGCCCCGACCTACCCGCGCTCCTGGCC
 CCCGGCAAGGAGTTCCTGCAACTGCCGTCCATTGAGATTACGCCCTCCAGCGACGAGGACACCCCGTGGT
 CCAACTGCTCCACACCCAGTGCCTCCCGCGCCGAAAACGCTTCTGCTCCGCAAGTGGGTGAGGGT
 GGAGCGGAAAGAATGCAGTGAAGCAGCAGCCAGCAAAGCAGCCAACAGAGCAGCCACGACGATGATT
 AGCAGGTTCCTGAGTCTCGAGTGCAGCAGAAAGCAGTCCAGTAACTCAACCCGAGCAGCCAGCCT
 GCTCTCCATCTCCGGAAGCGTCCCGCTCACCACACAGAACAGGACGGAGACCCATGGTGGAGAA
 GAGGGCTCAGATCACTCCTCGGACAAGTCCCGTCCACCCGAGCAGGGTGTGCAACGCAGTTGCTCC
 TCACAGTCTGGTCGGAGCGGTGGTAAAAATTCCAAGAAAAGCCAGAGTTGGTACAATGTGCTAAGCCCA
 CTTACAAGCAGAGAAATGAAGACTTCAGAAAGCTCTTAAAGCAACTTCCAGACACGGAGCGCCTCATTGT
 TGATTACTCTTGTGACTCCAAAGAGACATTCTTTCAGGGCCGACTCTACCTCTCAGAAAATTGGATC
 TGCTTCTACAGCAACATCTCCGCTGGGAAACCCTGCTGACAGTCCGTTTGAAGATATCTGCTCCATGA
 CTAAGAGAAAACAGCTCGCCTCATTCCAATGCCATCCAAGTCTGCACTGATTCAGAAAAGCACTTTTT
 TACTTCTTTGGAGCCCGGACAGGACGTACATGATGATGTTCCGGCTCTGGCAGAATGCTCTCCTTGAA
 AAGCCCTATGTCCAAGGAGCTCTGGCACTTTGTCCACAGTGTACGGGAACGAGCTGGGCCTAACCA
 GTGATGAGGACTACGTGCCTCAGTCACTTCAACACAATGGGCTACTGTGAGGACTCCCCAT
 AGAAGAGAATGAAGTGAATGACAGCTCATCCAAAAGTAGCATCGAGACCAAGCCGGATGCCAGCCACAG
 CTGCCCAAGAAGTCCATTACCAACAGCACACTGACGTCTACGGGAAGCAGTGAAGCCCTGTTTCGTTTG
 ATGGCTTGCCATTGGAGGAGGAGGTGATGGAGGGGATGGTTCCCTAGAGAAGGAGCTTGCCATTGACAA
 CATCATAGGGGAGAAGATCGAGATCATGGCGCCTGTGACCTCCCTTCGCTGGACTTCAATGACAATGAG
 GATATCCCACCGAGCTCAGTGATTCTTCAGATACCCACGATGAAGGAGAGGTCCAGGCCTTCTATGAGG
 ACCTGAGTGGAAGACAATATGTGAATGAGGTCTCAACTTCAGCGTGGACAACTCTATGACCTGCTGTT
 CACCAACTCACCTTCTGCGGGATTCATGGAGCAGCGCGTTCCTCTGATATCATCTCCATCCATGG
 AAAAGGAGGAGAATGGAACCAGAGTCGAGTGATTCTTACACTATCACCTCACTAATCTCTGGCTC
 CAAAACAGCCACTGTCAGGGAGACACAGACCATGTACAAGCGAGTCAGGAGAGCGAATGCTACGTGAT
 AGATGCTGAAGTCTCACCCACGATGTGCCGTACCATGACTACTTCTACACCATCAATCGCTACACACTC
 ACCAGAGTGGCCCGAACAAGAGCAGACTCAGGGTCTCCACAGAGCTCCGCTATCGAAAACAGCCCTGGG
 GGTTTGTGAAAACGTTTCTCGAGAAGAACTTCTGGAGTGGACTGGAGGACTACTCCGTCATTTAGAGAC
 TGAATAACAAAACAGAGAGTACCTACTTGGCTGAGATACACAGGCAGTACCCAAGGAGAAGGCTAGC
 AAGTCTTCAGCAGTCCGGAGGAGGAAGCGTCCCATGCCACCTGCGGGTGCCTCACCTGGAAGAAGTGA
 TGAGTCTGTACCACACCCACTGATGAAGATGTGGGCCACAGGATCAAGCACGTGGCAGGTTCCACGCA
 GACACGGCACATCCCGGAGGACACTCCTGATGGTTTTTACCTACAAAGTGTGTCCAAGTGTGCTGGTT
 ATCAGCTGTGTTCTGGTGTGCTGGTTGCTTAAACATGATGCTTCTACAAGCTGTGGATGCTGGAAT
 ACACCACCCAGACCTCACTGCCTGGCAGGGTCTCAGGCTCCAGGAAAAGTTACCCAGTCTCAGACAGA
 ATGGGCCAGCTATTAGAATCCCAACAGAAGTACCACGACACCGAGCTCCAGAAGTGGAGGGAAATCATC
 AAATCCTCAGTGTGCTCCTGGACCAGATGAAGGACTCGTTATCAATCTCAGAATGGTATCAGGTCCC
 GAGACTACACAGCTGAGAGCGACGAGAAGAGGAACCGCTATCAT**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_172768
Insert Size: 2637 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.

RefSeq: [NM_172768.1](#), [NP_766356.1](#)

RefSeq Size: 2814 bp

RefSeq ORF: 2637 bp

Locus ID: 235283

UniProt ID: [Q80TI0](#)

Cytogenetics: 9 A5.1

Gene Summary:

Cholesterol transporter that mediates non-vesicular transport of cholesterol from the plasma membrane (PM) to the endoplasmic reticulum (ER) (PubMed:30220461). Contains unique domains for binding cholesterol and the PM, thereby serving as a molecular bridge for the transfer of cholesterol from the PM to the ER (PubMed:30220461). Plays a crucial role in cholesterol homeostasis in the adrenal gland and has the unique ability to localize to the PM based on the level of membrane cholesterol (PubMed:30220461). In lipid-poor conditions localizes to the ER membrane and in response to excess cholesterol in the PM is recruited to the endoplasmic reticulum-plasma membrane contact sites (EPCS) which is mediated by the GRAM domain (PubMed:30220461). At the EPCS, the sterol-binding VASt/ASTER domain binds to the cholesterol in the PM and facilitates its transfer from the PM to ER (PubMed:30220461). [UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.