

Product datasheet for **MG209732**

Gramd1a (BC018554) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gramd1a (BC018554) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Gramd1a
Synonyms:	1300003M23Rik; AI415002; AW547240; D7Bwg0611e
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG209732 representing BC018554
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCAGAGCTGGTACAGTATGCTGTGCCACATACAACAACGCAACGAGGACTCCGGAAACTGTTCAG
 GCAAATTCCTGAAGCAGAGCGCCTCATCGTGGATTACTCCTGCGCCCTGCAGAGGGAGATCCTCCTCCA
 GGGCCGCCTCTACCTCTCTGAGAACTGGATCTGTTTCTACAGCAACATCTTCCGCTGGGAGACCACAATT
 TCCATCCAGTTGAAGGAAGTGACCTGTCTGAAGAAGGAGAAGACGGCTAAGCTCATCCCCAATGCCATTC
 AGATCTGTACTGAGAGTGAGAAGCATTCTTCACTTCTTCCGGGGCCGAGACCGCTGCTTCTCCTCAT
 CTTCCGCTCTGGCAGAATGCGCTGCTTAAAAGACACTGAGTCTCGAGAGCTTTGGCACCTGGTCCAT
 CAGTGTATGGCTCGGAGCTGGGCTCACCAGTGAAGACGAAGACTATGTCTGCCCTTGAACCTGAATG
 GTCTTGGGAGTCCAAAGAGGTGGGAGACATGATCGACTCAGCGACATCAGTCCCTCGGGGGCGGCTGA
 CCACAGCCAGGAGCAAGCCCTGTGGTTCAAGGCGTGGCCGGGTACCCCAAACCTCTCTCGAGCCAGC
 AGTGATGCAGACCATGGGGCCGAGGAGGACAAGGAAGAACAGACGGACAGTCAAGTGGATGCCTCCTCCA
 GCCAGACAGTGACCCAGTAGCAGAACCCTGAGTTCTGAGCCGACACCACAGATGGGGCCACTTCTCTC
 CTTGGGTCCTTGGATCTGCTGTCTAGAGAGGAACTATTGACAGACACGAGTAACTCGTCTCATCCACT
 GGGGAGGAAGGTGACCTGGCTGCACTGCTGCCTGACCTCTCCGGCCGGCTCCTCATCAACTCCGTTTCC
 ACATGGGTGCTGAGCGTCTGCAGCAGATGCTCTTCTCGGACTCTCCGTTCTGCAAGGCTTCTGCAGCA
 GCGCAAGTTCACAGATGTGACCTTGAGCCCTTGGAGCAGTGACAGCAAGTCCACCAGCGCAGAGTCCGT
 ACCTACACCATCCCATTAGCAACCAGCTAGGCCCAAGAGCGCCTCTGTGGTGGAGACACAGACGCTGT
 TCCGGCGCGGCCACAGGCGGGCGGGTGGTGGACTCTGAGGTGCTACCCAGGGCATCCCGTACCA
 GGACTACTTCTACACTGCCACCGATACTGTATCCTGGGTCTGGCCCGAACAAGGCCCGCTTCGTGTA
 TCCTCAGAGATCCGCTACCGAAAGCAACCGTGGAGCCTCGTAAAGTCGCTCATTGAGAAGAAGTCTGGA
 GCGGCATCGAAGATTATTTCCACCACCTGGATCGAGAAGTCCGCAAGGCAGAAAAGCTGTCCCTGGAGGA
 AGGAGGAAAAGATACACGTGGACTACTGTGAGGCTGCGGAGGAGGAAGCGGCCCTGAGCTGGAGGGGG
 CACAGAGATGGGCTCAGCACCAGACCCAGACCCCTGCACCCAGACCAGCATGCACACCTCAGGTTCCC
 TCAGCTCTCGTCTCGGAACCATCTGTGGATCAGGGCCCTGGGGCAGGCATCCCGAGCCCTGGTTCT
 CATCAGCATTGCTCTCATCGTTCTCATGCCCTCAATGCCCTCCTTCTACCGTCTCTGGTCTCTGGAG
 AGAACAGCCCATACCTTTGAGTCTGGCACAGCCTGGCACTGGCCAAGGGCAAGTCCCCAGACAGCCA
 CGGAGTGGGCGGAGATCTTGGCTCTGCAGAAGCACTTCCACAGCGTTGAGGTGCACAAGTGGAGGCAGAT
 CCTTCGAGCATCCGTGGAGCTCCTGGATGAGATGAAGTCTCCTTGGAGAAGCTACATCAAGGAATTACT
 GTCCCGGATCCTCCCCTGGACACTCAGCCACAGCCTGATGACAGTTTTCCC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG209732 representing BC018554
 Red=Cloning site Green=Tags(s)

MQSWYSMLCPTYKQRNEDFRKLFKLPKPEAERLIVDYSICALQREILLQGRLYLSENWICFYNSIFRWETT
 SIQLKEVTCLKKEKTAKLIPNAIQICTESEKHFFTSFGARDRCFLLI FRLWQNALLEKTLSPRELWHLVH
 QCYGSELGLTSEDEDYVCPLQLNGLGSPKEVGDIALSDISPSGAADHSQEPSPVSGRRGRVTPNLSRAS
 SDADHGAEEDEKQTDSQLDASSQTVTPVAEPLSSEPTPPDGPTSSLGPLDLLSRELLTDTSNSSST
 GEEGDLAALLPDLRGLLINSVFHMGAEERLQQMLFSDSPFLQGFLQQRKFTDVTLSPWSSDSKCHQRRVL
 TYIPIISNQLGPKSASVETQTLFRRGPQAGGCVVVSEVLTQGIPIQDYFYTAHRYCILGLARNKARLRV
 SSEIRYRKPWSLVKSLIEKNSWGIEDYFHHLDRDLAKAEKLSLEEGKDRGLLSGLRRRKRPLSWRG
 HRDGPQHPDPDPTQTSMTSGSLSSRFSEPSVDQPGAGIPSAVLISIVLIVLIALNALLFYRLWSLE
 RTAHTFESWHSALAKGKFPQATEWAEILALQKHFHSVEVHKWRQILRASVELLDEMKSLEKLHQGIT
 VDPPLDTQPQDDSF

TRTRPLE – GFP Tag – V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



ACCN: BC018554

ORF Size: 1941 bp

OTI Disclaimer: 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.

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

RefSeq: [BC018554](#), [AAH18554](#)

RefSeq Size: 2513 bp

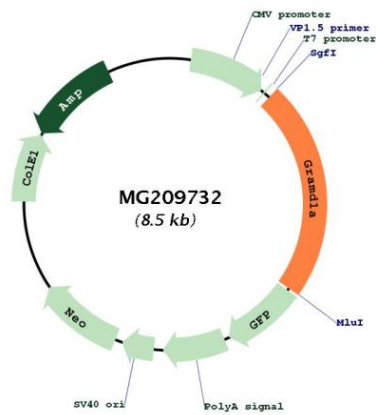
RefSeq ORF: 1943 bp

Locus ID: 52857

Cytogenetics: 7 19.3 cM

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 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 VAS_t/AS_TER domain binds to the cholesterol in the PM and facilitates its transfer from the PM to ER (PubMed:30220461). May play a role in tumor progression (PubMed:27585821).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG209732