

Product datasheet for **MR209732**

Gramd1a (BC018554) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gramd1a (BC018554) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Gramd1a
Synonyms:	1300003M23Rik; AI415002; AW547240; D7Bwg0611e
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>MR209732 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCAGAGCTGGTACAGTATGCTGTGCCACATACAACAACGCAACGAGGACTCCGGAAACTGTTCAG
 GCAAATTCCTGAAGCAGAGCGCCTCATCGTGGATTACTCCTGCGCCCTGCAGAGGGAGATCCTCCTCCA
 GGGCCGCCTCTACCTCTCTGAGAACTGGATCTGTTTCTACAGCAACATCTTCCGCTGGGAGACCACAATT
 TCCATCCAGTTGAAGGAAGTGACCTGTCTGAAGAAGGAGAAGACGGCTAAGCTCATCCCCAATGCCATTC
 AGATCTGTACTGAGAGTGAGAAGCATTCTTCACTTCTTCCGGGGCCGAGACCGCTGCTTCTCCTCAT
 CTTCCGCTCTGGCAGAATGCGCTGCTTGAAGAAGACACTGAGTCTCGAGAGCTTTGGCACCTGGTCCAT
 CAGTGTATGGCTCGGAGCTGGGCTCACCAGTGAAGACGAAGACTATGTCTGCCCTTGAACCTGAATG
 GTCTTGGGAGTCCCAAAGAGGTGGGAGACATGATCGCACTCAGCGACATCAGTCCCTCGGGGGCGGTGA
 CCACAGCCAGGAGCAAGCCCTGTGGTTCAAGGCGTGGCCGGGTCAACCCAAACCTCTCTCGAGCCAGC
 AGTGATGCAGACCATGGGCGGAGGAGGACAAGGAAGAACAGACGGACAGTCAAGTGGATGCCTCCTCCA
 GCCAGACAGTGAACCCAGTAGCAGAACCCTGAGTTCTGAGCCGACACCACAGATGGGCCCCACTTCTCT
 CTTGGGTCCTTGGATCTGCTGTCTAGAGAGGAACTATTGACAGACACGAGTAACTCGTCTCATCCACT
 GGGGAGGAAGGTGACCTGGCTGCACTGCTGCTGACCTCTCCGGCCGGCTCCTCATCAACTCCGTTCTCC
 ACATGGGTGCTGAGCGTCTGCAGCAGATGCTCTTCTCGGACTCTCCGTTCTGCAAGGCTTCTGCAAGCA
 GCGCAAGTTCACAGATGTGACCTTGAGCCCTTGGAGCAGTGACAGCAAGTCCACCAGCGCAGAGTCCGT
 ACCTACACCATCCCCATTAGCAACCAGTAGGCCCAAGAGCGCCTCTGTGGTGGAGACACAGACGCTGT
 TCCGGCGCGGCCACAGGCGGGCGGGTGGTGGTGGACTCTGAGGTGCTCACCCAGGGCATCCCCACCA
 GGACTACTTCTACACTGCCACCGATACTGTATCCTGGGTCTGGCCCGGAACAAGGCCCGCTTCGTGTA
 TCCTCAGAGATCCGCTACCGAAAGCAACCGTGGAGCCTCGTAAAGTCGCTCATTGAGAAGAAGTCTGTGA
 GCGGCATCGAAGATTATTTCCACCACCTGGATCGAGAAGTCCGCAAGGCAGAAAAGTGTCCCTGGAGGA
 AGGAGGGAAAGATACACGTGGACTACTGTGAGGCTGCGGAGGAGGAAGCGGCCCTGAGCTGGAGGGGG
 CACAGAGATGGGCTCAGCACCCAGACCCAGACCCCTGCACCCAGACCAGCATGCACACCTCAGGTTCCC
 TCAGCTCTCGCTTCTCGGAACCATCTGTGGATCAGGGCCCTGGGGCAGGCATCCCCAGCGCCCTGTTCT
 CATCAGCATTGCTCTCATCGTTCTCATCGCCCTCAATGCCCTCCTTCTACCGTCTCTGGTCTCTGGAG
 AGAACAGCCCATACCTTTGAGTCTGGCACAGCCTGGCACTGGCCAAGGGCAAGTCCCCCAGACAGCCA
 CGGAGTGGGCGGAGATCTTGGCTCTGCAGAAGCACTTCCACAGCGTTGAGGTGCACAAGTGGAGGCAGAT
 CCTTCGAGCATCCGTGGAGCTCCTGGATGAGATGAAGTCTCCTTGGAGAAGCTACATCAAGGAATTACT
 GTCCCGGATCCTCCCCTGGACTCAGCCACAGCCTGATGACAGTTTTCCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR209732 protein sequence
Red=Cloning site Green=Tags(s)

MQSWYMLCPTYKQRNEDFRKLF SKLPEAERLIVDYSICALQREILLQGRLYLSENWICFYSNIFRWETT
 SIQLKEVTCLKKEKTAKLIPNAIQICTESEKHFFTSFGARDRCFLLIIFRLWQNALLEKTLSPRELWHLVH
 QCYGSELGLTSEDEDYVCLQLNGLGSPKEVGDIALSDISPSGAADHSQEPSPVGSRRGRVTPNLSRAS
 SDADHGAEEDKKEEQTDSQLDASSSQVTPVAEPLSSEPTPPDGPTSSLGPLDLLSREELLTDTSNSSSST
 GEEGDLAALLPDL SGRLLINSVFHMGAEERLQQMLFSDSPFLQGFLQQRKFTDVTLSPWSSDKCHQRRVL
 TYTIPIISNLGPKSASVETQTLFRRGPQAGGCVV DSEVLTQGGIPYQDYFYTAHRYCILGLARNKARLRV
 SSEIRYRKPWSLVKSLIEKNSWSGIEDYFHHLDR ELAKAEKLSLEEGGKDTRGLLSGLRRRKRPLSWRG
 HRDGPQHPDPDPCQTSMHTSGSLSSRFSEPSVDQGGAGIP SALVLSIVLIVLIALNALLFYRLWSLE
 RTAHTFESWHSALAKGKFPQTATEWAEILALQKHFSVEVHKWRQILRASVELLD EMMKFSLEKLHQGIT
 VPDPLDTQPQPDDSPF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



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

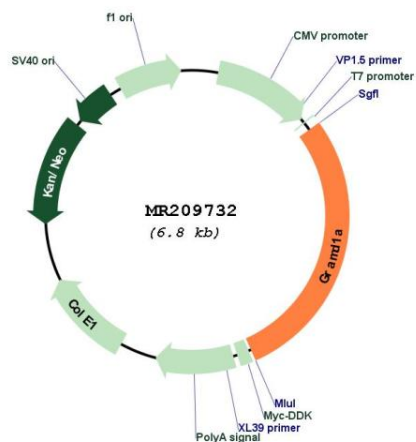
Locus ID: 52857

Cytogenetics: 7 19.3 cM

MW: 72.8 kDa

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 VASt/ASTER 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 MR209732