

Product datasheet for **MR218977**

Gramd1a (NM_027898) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	Gramd1a
Synonyms:	I300003M23Rik; AI415002; AW547240; D7Bwg0611e
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



ORF Nucleotide Sequence: >MR218977 representing NM_027898
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAAACGACTCACTATAGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGTTGACACACGCCCCACTCTGGCCGGAGCTCCCCAGCAGCTCCCGTCTCTTCGTAAGCGGCTTC
 AGCTCTTGCCCCAATCCGGCCCCCTCCGGCTTCTGAGCCAGAACCAGGCACCATGGTGGAGAAGGGGTC
 TGACAGCTCCTCTGAGAAAAGTGGCGTGTGGGGGACACTCAGCACCAGAGCCTGGGCAGCCGGAACCTC
 ATCCGCAACAGTAAGAAGATGCAGAGCTGGTACAGTATGCTGTGTCCACATACAAACAACGCAACGAGG
 ACTTCCGAAACTGTTCCAGAACTTCTGAAGCAGAGCGCCTCATCGTGGATTACTCCTGCGCCCTGCA
 GAGGGAGATCCTCCTCCAGGGCCGCTCTACCTCTCTGAGAACTGGATCTGTTTCTACAGCAACATCTTC
 CGCTGGGAGACCACAATTTCCATCCAGTTGAAGGAAGTGACCTGTCTGAAGAAGGAGAAGACGGCTAAGC
 TCATCCCCAATGCCATTAGATCTGTACTGAGAGTGAGAAGCATTCTTCACTTCTTCGGGGCCCGAGA
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 CTTTGGCACCTGGTCCATCAGTGCTATGGCTCGGAGCTGGGCCTACCCAGTGAAGACGAAGACTATGTCT
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 AACCTCTCTCGAGCCAGCAGTATGCAGACCATGGGGCCGAGGAGGACAAGGAAGAACAGACGGACGGTC
 TGGATGCCTCTCCAGCCAGACAGTGACCCAGTAGCAGAACCCTGAGTTCTGAGCCGACACCCAGAGA
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 TCGTCTCTCACTGGGAGGAAGGTGACCTGGCTGCACTGCTGCCTGACCTCTCCGGCCGGCTCTCA
 TCAATTCTGTCTCCACATGGGTGCTGAGCGTCTGCAGCAGATGCTTCTCGGACTCTCCGTTCTCTGCA
 AGGCTTCTGCAGCAGCGCAAGTTCACAGATGTGACCTTGAGCCCTTGAGCAGTGACAGCAAGTGCCAC
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 GCCCGGCTTCGTGTATCCTCAGAGATCCGCTACCGAAAGCAACCGTGGAGCCTCGTAAAGTCGCTCATTG
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 CAGCGCCCTGGTCTCATCAGCATTGTCTCATCGTTCTCATCGCCCTCAATGCCCTCTCTTACCGT
 CTCTGGTCTCTGGAGAGAACAGCCCATACCTTTGAGTCTGGCACAGCCTGGCACTGGCCAAGGGCAAGT
 TCCCCAGACAGCCACGGAGTGGCGGAGATCTTGGCTCTGCAGAAGCACTTCCACAGCGTTGAGGTGCA
 CAAGTGGAGGCAGATCCTTCAGCATCCGTGGAGCTCCTGGATGAGATGAAGTTCTCCTTGGAGAAGCTA
 CATCAAGGAATTACTGTCCCGATCTCCCTGGACACTCAGCCACAGCCTGATGACAGTTTTCCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

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>MR218977 representing NM_027898
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Red=Cloning site Green=Tags(s)

MFDTTPHSGRSSPSSPSLRKRLQLLPPIRPPASEPEPGTMVEKGSDDSSSEKSGVSGTLSTQSLGSRNF
IRNSKKMQSWYSMLCPTYQQRNEDFRKLFSKLPEAERLIVDYSCALQREILLQGRLYLSENWICFYSNIF
RWETTISIQLKEVTLCKKEKTAKLIPNAIQTCESEKHFFTSFGARDRCFLIFRLWQNALLEKTLSPRE
LWHLVHQCYGSELGLTSEDEDYVCLQLNGLGSPKEVGDVIALSDISPSGAADHSQEPSPVSGRRGRVTP
NL SRASSDADHGAEDKEEQTDGLDASSQVTPVAEPLSSEPTPDGPTSSLGPLDLLSREELLTDTSN
SSSSTGEEGDLAALLPDLSGRLLINSVFHMAERLQQMLFSDSPFLQGFLQQRKFTDVTLSPWSSDSKCH
QRRVLTYTIPISNQLGPKSASVVTQTLLFRGPGAGGCVVDSVLTQGPYQDYFYTAHRYCILGLARNK
ARLVSSEIRYRKQPSLVKSLIEKNWSGIEDYFHHLDR ELAKAEKLSLEEGGKDRGLLSGLRRRKRP
LSWRGHRDGPQHFDPLCTQSMHTSGSLSSRFSEPSVDQGPAGIPSAVLISIVLIVLIALNALLFYR
LWSLERTAFTFESWHLALAKGFPQTATEWAEILALQKHFFHSVEVHKWRQILRASVELLDEMKF SLEKL
HOGITVPPDPLDTOPOPDDSEFP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

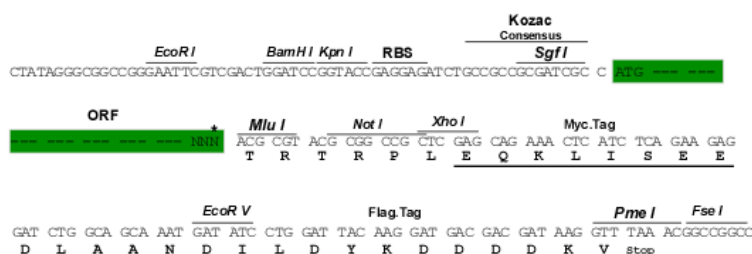
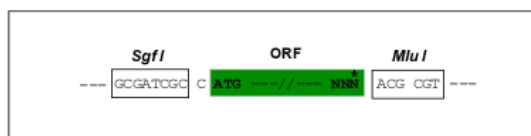
https://cdn.origene.com/chromatograms/mm9004_e01.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN:

NM_027898

ORF Size:

2166 bp

OTI Disclaimer:

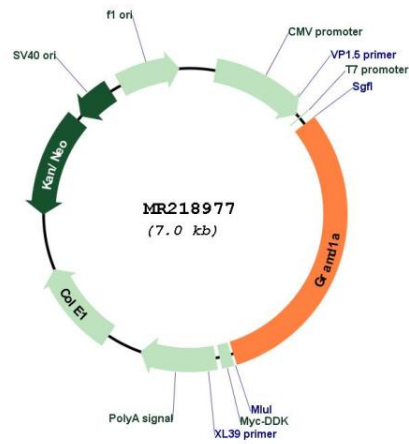
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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:	NM_027898.4
RefSeq Size:	2681 bp
RefSeq ORF:	2169 bp
Locus ID:	52857
UniProt ID:	Q8VEF1
Cytogenetics:	7 19.3 cM
MW:	81.1 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 MR218977