

Product datasheet for **MR225809**

Dgat1 (NM_010046) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Dgat1 (NM_010046) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Dgat1
Synonyms:	ARAT; C75990; D15Erttd23e; Dgat
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR225809 representing NM_010046
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGCGACCCGGAGGGCGGGGAAGCTCTCGGCGTCGGAGGACCGGCTCGCGGGTTTCGTCAGGGTG
 GTAGTGGGCCAAGGTAGAAGAGGACGAGGTGCGAGACGCGGCTGTGAGCCCCGACTTGGGCGCCGGGG
 TGACGCGCCGGCTCCGGCTCCGGCTCCAGCCATACCCGGGACAAAGACGGGCGGACCAGCGTGGGCGAC
 GGCTACTGGGATCTGAGGTGCCATCGTCTGCAAGATTCTTTGTTGAGCTCAGACAGTGGTTTCAGCAATT
 ATCGTGGTATCCTGAATTGGTGTGGTGTGCTGATCCTGAGTAATGCAAGTTATTTTTAGAGAACCT
 TATCAAGTATGGCATCCTGGTGGATCCTATCCAGGTGGTGTCTCTGTTTCTGAAGACCCCTACAGCTGG
 CCTGCCCATGCGTGATTATTGCATCCAATATTTTTGTTGGTGCATTTAGATTGAGAAGCGCCTGG
 CAGTGGGTGCCCTGACAGAGCAGATGGGCTGCTGCTACATGTGGTTAACCTGGCCACAATCATCTGCTT
 CCCAGCAGCTGTGGCCTTACTGGTTGAGTCTACTCCAGTGGGTTCCGTGTTTGTCTGGCATCATACT
 TCCATCATGTTCCCAAGCTTTATTCCTACCGGATGTCAACCTGTGGTCCGCCAGCAAGGGTCAAGG
 CCAAAGCTGTCTTACAGGGAAGAAGGTCAAGTGGGCTGCTGCCAGCAAGCTGTGAGCTATCCAGACAA
 CCTGACCTACCGAGATCTCTATTACTTCATCTTTGCTCCTACTTTGTGTTATGAAGTCAACTTTCCTCGG
 TCCCCCGAATACGAAAGCGCTTTCTGCTACGACGAGTCTTGAGATGCTCTTTTTTACCGACTCAAG
 TGGGGCTGATCCAACAGTGGATGGTCCCTACTATCCAGAACTCCATGAAGCCCTCAAGGATATGGACTA
 TTCAGGATCATTGAGCGTCTCTAAAGCTGGCGGTCCCCAACCATCTGATCTGGCTTATCTTCTCTAT
 TGGTTTTTCCACTCCTGTCTCAATGCTGTGGCAGAGCTTCTGCAGTTTGGAGACCGCGAGTCTACAGAG
 ATTGGTGAATGCTGAGTCTGTACCTACTTTTGGCAGAACTGGAATATCCCCGTGCACAAGTGGTGCAT
 CAGACACTTCTACAAGCCTATGCTCAGACATGGCAGCAGCAAATGGGTGGCCAGGACAGGATATTTTTG
 ACCTCAGCCTTCTCCATGAGTACCTAGTGGCGTTCCCTGCGGATGTTCCGCCTCTGGGCATTACAG
 CCATGATGGCTCAGTCCACTGGCCTGGATTGTGGCCGATTCTTCAAGGAACTATGGCAATGCAGC
 TGTGTGGGTGACACTCATATTGGGCAACCGGTGGCTGTGCTCATGTATGTCCACGACTACTACGTGCTC
 AACTACGATGCCCCAGTGGGGTCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR225809 representing NM_010046
 Red=Cloning site Green=Tags(s)

MGDRGGAGSSRRRTGSRVSVQGGSGPKVEEDEVRAAVSPDLGAGDAPAPAPAPAHRDKDGRTSVGD
 GYWDLRCHRLQDSLFSDDSGFSNYRGILNWCVVMLILSNARLFLENLIKYGILVDPIQVVSFLKDPYSW
 PAPCVIIASNIFVAAFQIEKRLAVGALTEQMGLLLHVVNLATIICFPAAVALLVESITPVGSVFALASY
 SIMFLKLYSYRDVNLWCRQRRVKAKAVSTGKKVSGAAAQAVSYPDNLTYRDLYYFIFAPTLCEYLNFRP
 SPRIRKRFLLRRVLEMLFFTLQVGLIQQVMVPTIQNSMKPFKMDYSRIIERLLKLAVPNHLIWLIFFY
 WFFHSLNAVAELLQFGDREFYRDWNAESVTYFQNWNIIPVHKWCIRHFYKPLMRHGSSKQWARTGVFL
 TSAFFHEYLVSPLRMFRLWAFTAMMAQVPLAWIVGRFFQGNYGNAAVVVTLIIGQPVAVLMYVHDYVVL
 NYDAPVGV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mm9016_d11.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_010046

ORF Size: 1494 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](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

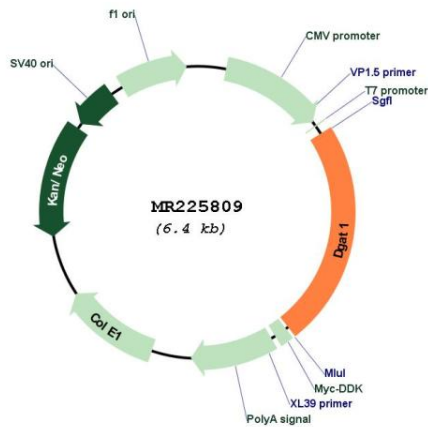
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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_010046.3](#)
RefSeq Size: 1776 bp
RefSeq ORF: 1497 bp
Locus ID: 13350
UniProt ID: [Q9Z2A7](#)
Cytogenetics: 15 35.99 cM
MW: 57.2 kDa

Gene Summary: Catalyzes the terminal and only committed step in triacylglycerol synthesis by using diacylglycerol and fatty acyl CoA as substrates. In contrast to DGAT2 it is not essential for survival. May be involved in VLDL (very low density lipoprotein) assembly. In liver, plays a role in esterifying exogenous fatty acids to glycerol. Functions as the major acyl-CoA retinol acyltransferase (ARAT) in the skin, where it acts to maintain retinoid homeostasis and prevent retinoid toxicity leading to skin and hair disorders.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR225809