

Product datasheet for **MR218359**

Gpat2 (NM_001081089) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gpat2 (NM_001081089) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Gpat2
Synonyms:	A530057A03Rik; Gm116; xGPAT1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR218359 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTTGAAATCCAACCCCAACCAGCAGAGGAGTAACCACAATGGTCAAGAGACCAGCCTTTGGTCT
 CAAGCTTTGGGATGAAGATGGAGGCCATCACTCCATTCCTGGGAAAGTATCGCCCTTTATGGGCCGCTG
 CTGCCAGACCTGTACTCCTAAGAGCTGGGAGTCCCTCTTCCACAGAAGCATAATGGACCTGGGCTTCTGC
 AACGTGATCCTTGTGAAGGAGGAGAACACCAGGTTCCGGGGCTGGCTGGTTCGCAGGCTCTGCTATTTCC
 TGTGGTCCCTGGAGCAGCACATACCACCAGTTTTGATGCCTCCAGAAGATCATGGAAAACACTGGGGT
 GCAGAACCTCCTCTCGGGGAGGGTTCGGGAGCGGCTGGAGAAGGCCAGGCGCCTGAATTAGTGAAGAAA
 GAGGTACAGCGTATCCTGAGCCACATTCAGACCACACCCCGCCCTTCTTGCTCAGGCTGTTAGCTGGG
 CACTGCTGTGGTTCCTGAACCGCCTTCTCTGAATGTACAACCTCACAAAGGACAGATGAAGATGGTTCA
 GAAGGCTGTGAGGAGGGCTCTCCACTTGTCTTCTTTCTACACACAAGTCCCTCTGGATGGATTCCTG
 CTGCCCTTTGACTGTTCTCCAAAGGCCTCGGTGTGGTCCGTGTGGCTTTAGACTCCCGCACATGTTCC
 CTGCTCTCAGAGCTCTATTGAGGAACTTGGGGGACTTTTCTGCCCCAGAGGTCAACCTCCTTGGGA
 CAACTCAGAGGGCATCCTTGAAGGGCTGTGGTCCATGCAACTGTGGAGGAGCTGCTTACTAGTGGTCAG
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 GGCTAGGAGTGGTAATCCAGGCGGTCCAGGCAGGCATTATCTCAGATGCCACACTGGTACCAGTTGCCAT
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 GGAGCCTGGCTGTCTTTCGGAGACTGTGTAACCTGCTGGGGCTGCAACCGTAGAGTCTGTGTCCGGGTGC
 ACCTTGCCAGCATTTCCTCCAGGAATACCCATCAATGCTAGAAGTTGCTGGGATAGCAGGCAGAC
 CTTGGAACACTTGTTCAGGCCATTGTGCTAGGTGAATGTAGTGTGTTCCGGACACTGAGAAGGAGCAG
 GAGTGGACCCCAACTGGCCTCCTCCTGGCCCTTAAAGAGGAGGACCAGCTCCTGGTCAAGAGCTGA
 GCCGGCATGTTCTGAGTGCCAGTGTGGCCAGCTCCGCAGTGATGAGCACAGCCATCATGGCCACACTGCT
 TTTGCTGAAGCACAAAAGGGTGTGGTCTGTACAGCTCCTGGGAGAATTCTCCTGGCTGACAGAGGAG
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 TATTGAGGGCACATGTGGTCTGCTGCGTGTCCACCAAGGGGACTTGGTGGTGGTACCTCGGCTGGCCC
 AGGCCTCACACACCTGGCAGCTTGAGTATGGAATTGCTGCCAACCTTCTGAGTGAAGCTGTGGGTGCC
 TGTGACGTGCGGGGGTGTGGCAGGCAGAGTACCACCTGAGGGGCCCTGGGAGCTGCAGGGCATAGAGC
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 GCCCAGCCCTGCCAGTCTTCTACTGCTACTGTGAGGAAGTGTAGACCGGCTCATCCAGTGTGGACTC
 CTAGTTGCTGAGGAGACTCCAGGCTCCCGGCCAGCCTGTGACACAGGAAGACAGCATCTGAGTGCAAAGC
 TGCTGTGGAAGCCGAGTGGGGACTTACTGACAGTGAGAGTGACTTTGAGGAGCCAGGAGGCCGCTG
 CTTAGGCTTAGCCAGCAATCCCGCTGCCCTGACTTCTTCTCTCTCTGCCGCTTGTCTCAGTCCCATA
 CTCAAGGCCTTCGCACAGGCGGCCACCTTCTCCACTTAGGGCAGCTGCCAGATTAGAGGTGGCCTACT
 CAGAGAAGTTGTCCAGTTTTTACAGGCCTGTGCCAAGAAGAAGGGATCTTTGAGTGTGCAGACCCAAA
 CCTTGCTATCAGTGCAGTCTGGACGTTCAAAGATCTGGGGTACTTCAGGAGATGCCTAGCCCTACAGGA
 CCCAGCTCCACCTGTCCCTACATTTGCCACCCGGGACAATCAGGACAAGCTGGAACAATTTATCCGAC
 AGTTCATCTGCAGT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR218359 protein sequence

Red=Cloning site Green=Tags(s)

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MLKSNPQTQQRSNHNGQETSLWSSSFGMKMEAITPFLGKYRPFMGRCCQTCTPKSWESLFHRSIMDLGFC
NVILVKEENTRFRGWLVRRLCYFLWSLEQHIPTSFDAQKIMENTGVQNLLSGRVPGAAGEGQAPELVKK
EVQRILSHIQTTPRPFLRLFSWALLWFLNRLFLNVQLHKQMKMVQKAVQEGSPLVFLSTHKSLLDGFL
LPFVLFVFSQGLGVVVRVALDSRTCSPALRALLRKLGGFLPPEVNLSLDNSEGILARAVVHATVEELLTSGQ
PLLIIFLEPPGSPGPRLSALGQAWLGVVIQAVQAGIISDATALVPVAIAYDLVPDAPCNMNHDLAPLGLWT
GALAVFRRLCNCWGCNRRVCVRVHLAQPFSLQEYTIINARSCWDSRQTLEHLLQPIVLGECVVPDTEKEQ
EWTPTGLLLALKEEDQLLVRRLSRHVLASVASSAVMSTAIMATLLLLKHQKGVVLSQLLGEFSWLTEE
TLLRGFDVGFSGQLRCLAQHTLSLLRAHVLLRVHQGDLVVVPRPGPGLTHLARLSMELLPTFLSEAVGA
CAVRGLLAGRVPPEGPWELQGIELLSQNELYRQILLLLHLLPQDLLLLPQPCQSSYCYCQEVLDRLIQCGL
LVAEETPGSRPACDTGRQHLSAKLLWKPSGDFDSEDDFEPPGGRCFRLSQQSRCPDFFLFLCRLLSPI
LKAFQAATFLHLGQLPDSEVAYSEKLFQFLQACAQEEGIFECADPNLAI SAVWTFKDLGVLQEMPSTG
PQLHLSPTFATRDNDKLEQFIRQFICS
  
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TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_001081089

ORF Size: 2397 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.

RefSeq: [NM_001081089.1](#), [NM_001081089.2](#), [NP_001074558.1](#), [NP_001074558.2](#)

RefSeq Size: 2636 bp

RefSeq ORF: 2406 bp

Locus ID: 215456

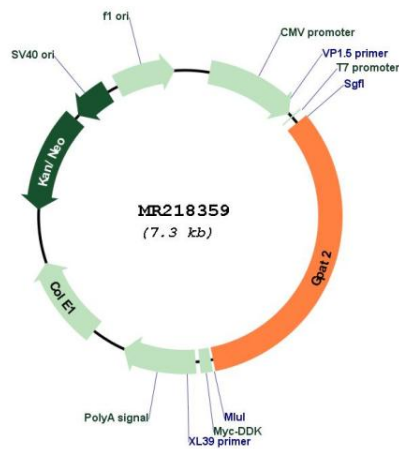
UniProt ID: [Q14DK4](#)

Cytogenetics: 2 F1

MW: 88.8 kDa

Gene Summary: Esterifies acyl-group from acyl-ACP to the sn-1 position of glycerol-3-phosphate, an essential step in glycerolipid biosynthesis (PubMed:17013544, PubMed:17689486). Required for primary processing step during piRNA biosynthesis (PubMed:23611983). Molecular mechanisms by which it promotes piRNA biosynthesis are unclear and do not involve its acyltransferase activity (PubMed:23611983).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR218359