

## Product datasheet for **RN217218**

### **Gpat2 (NM\_001168529) Rat Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Gpat2 (NM_001168529) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Gpat2
Synonyms:	RGD1304904
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >RN217218 representing NM\_001168529  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGAGACCATGTTGAAGTCCAACCCTCAAATGCAGCAGAGGAATAACCACAGTGGTCAAGAGACCAGCC  
 TTTGGTCTCAGGCTTTGGGATGAAGATGGAGGCCATCACTCCATTCTGGGGAAGTATCGCCCCTTAT  
 GGGTCGATGCTGCCAGACCTGTACCCTAAGAGCTGGGAGTCCCTCTCCACAGAAGCATATGGATCTG  
 GGCTTCTGCAATGTGATCCTTGTGAAGGAGGAGAATACCAGGTTTCGGGGCTGGCTGGTTCGACGGCTCT  
 GCTATTTCTATGGTCCCTGGAGCAGCACATACCACCAGCTCTGATGCCTCCAGATGATCATGGAAAA  
 CACTGGGGTGCAGAACATCCTCTGGGGAAGGTTCCAGGAGCGGCTGGAGAAGGCCAGGCACCTGACCTA  
 GTGAAGAAAGAGGTACAGCGCATCTGGCCACATTAGACCACACCCCGTCCCTCTTGCTTAGGCTGT  
 TCAGCTGGGCACTGCTGTGGTTCCTGAACCGCTCTTCTGAACGTTCAACTTACAAGGGACAGATGAA  
 GATGGTCCACAAGGCTGCCAGGAGGGCTCTCCACTTGTCTTCTTTCTACACACAAGTCCCTCTGGAT  
 GGGTTCCTGCTGCCTTTTGTACTGTTCTCCAAGGGCTCGGTGTGCTCCGTGTGGCTTGGACTCCCGTA  
 CTGTTCCTGCTCTCAGAGCTCTACTGAGGAACTTGGGGGGCTTTTCTGCCCCAGAGGCCAACCT  
 CTCATTGGACAGCTCAGAGGGCATCCTTGAAGGGCTGTGGTCCGTGCAACGGTGGAGCAGCTGCTTACT  
 AGTGGTCAGCCCTGCTCATCTTCTGGAAGAGGCCCTGGGTACCCAGGGCCAGGCTTTCTGCCTGG  
 GCCAGGCTGGCTAGGACTGGTAGTCCAGGCGGTCCAGGCAGGCATCGTCCAGATGCCACACTGGTACC  
 AGTTGCCACTGCATATGATCTGGTTCAGATGCACCATGTAACATGACTCATGACCTGGCCCCCTGGGG  
 CTATGGACAGGAGCCTTGCCATCTTTCGGCGACTGTGCAACTGTGGGGCTGTAACCGTAGAGTCTGTG  
 TCCGGGTGCACCTTGCCAGCCATTTTCCCTCCAGGAATATACCATCAATGCTCGAAGTTGCTGGGGTAG  
 CAGGCAGACCCTGGAACACTTGTGACGCCATTGTGCTAGGTGAATGTAGTGTGTTCCAGACACTGAG  
 AAAGAGCAGGAGTGGACCCACCAACTAGCCTCCTCTGGCCCTCAAAGAAGAGGACCAGCTCCTGGTCA  
 GAAGACTGAGCCGGCATGTTCTGAGTGCCAGTGTGGCCAGCTCAGCAGTATGAGCACGGCCATCATGGC  
 AACACTGTTGCTGCTGAAGCACAAAAGGGTGTGGTCTGTACAGCTCCTGGGGGAATTCTCTGGCTG  
 ACAGAGGAGACTGCTCCGAGGTTTGTATGTGGGCTTCTCAGGGCAGCTGCGGTGCCTGGCCCAACATA  
 CGCTGAGCCTCTTGAGGGCACATGTGGTCTGCTGCGTGTCCACCAAGGGGACTTGGTGGTGGTCCACG  
 GCCTGGCCAGGCTCACACATCTGGCAGCTTGTAGTATGGAATTGCTGCCACCTTCTGAGTGGGCT  
 GTGGGTGCTGTGCGGTGAGGGGTTGCTGGCGGCAGAGTACCCTGAGGGGCCCTGGGAGCTGCAGG  
 GCATAGAGCTGTGAGTCAGAATGAACTGTACCGCCAGATCCTACTGCTGCTGCACCTGCTACCTCAAGA  
 CCTGTTGCTGCCCGACCTGCCAGTCTTCTACTGCTACTGTGAGGAGGTGCTGGACCGGCTCATCCAG  
 TGCGGGCTCCTGGTTGCAGAGGAGACCCAGGCTCCCGGCCAGCCTGTGACACAGGAAGACAGCATCTGA  
 GTGCAAAGCTGCTGTGGAACCAAGTGGAGACTTACTGACAGTGTGAGTGTGACTTCGAGGAGCCAGG  
 GGGCCGCTGCTCAGGCTTAGCCAGCAGTCTCGCTGCCCTGACTTCTTCTTCTCTGCCGCTGCTC  
 AGTCCATACTCAAGGCTTTGCACAGGCAGCCACCTTCTCCACTTGGGGCAGCTGCCAGATTAGAGG  
 TGGGCTACTCAGAGAAGTGTTCAGTTTTTACAGGCTGTGCCAGGAAGAAGGGATCTTTGAGTGTGC  
 AGACCCAAATCTCGCTATCAGTGAATCTGGACATTCAAAGACCTGGGGTACTGCAGCAGATACCCAGC  
 CCTACAGGACCCAGCTCCACCTGTACCTACATTTGCCAGCCGGACAATCAGGACAAGCTGGAACAAT  
 TCATCCGACAGTTCATCTGCAGT**TAG**

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_001168529  
**Insert Size:** 2406 bp

<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>OTI Annotation:</b>	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_001168529.1</a></u> , <u><a href="#">NP_001162001.1</a></u>
<b>RefSeq Size:</b>	2617 bp
<b>RefSeq ORF:</b>	2406 bp
<b>Locus ID:</b>	296130
<b>UniProt ID:</b>	<u><a href="#">D3ZI76</a></u>
<b>Cytogenetics:</b>	3q36
<b>Gene Summary:</b>	Transfers an acyl-group from acyl-ACP to the sn-1 position of glycerol-3-phosphate producing a lysophosphatidic acid (LPA), an essential step for the triacylglycerol (TAG) and glycerophospholipids. In vitro also transfers an acyl-group from acyl-ACP to the LPA producing a phosphatidic acid (PA). Prefers arachidonoyl-CoA as the acyl donor. Required for primary processing step during piRNA biosynthesis. Molecular mechanisms by which it promotes piRNA biosynthesis are unclear and do not involve its acyltransferase activity. [UniProtKB/Swiss-Prot Function]