

## Product datasheet for **SC122706**

### Alanine Transaminase (GPT) (NM\_005309) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Alanine Transaminase (GPT) (NM_005309) Human Untagged Clone
Tag:	Tag Free
Symbol:	Alanine Transaminase
Synonyms:	AAT1; ALT1; GPT1
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene sequence for NM\_005309 edited  
 AGGGCTGCCACTTGGACTCCCTTGCCAGGGGGCGGGCAGGGGCTGGCTCTGCCTGGGGCC  
 AGGCCATGTAACTGTGCCCCGGCCTGGGGCCAGAGGGGCAGGCCTGCGCACGGGA  
 GGCTGTTGTGGCAGCGGAACAGAGACGTGCACGAGTCATGGCCTCGAGCACAGGTGACCG  
 GAGCCAGGCGGTGAGGCATGGACTGAGGGCGAAGGTGCTGACGCTGGACGGCATGAACCC  
 GCGTGTGCGGAGAGTGGAGTACGCAGTGCCTGGCCCATAGTGCAGCGAGCCTTGGAGCT  
 GGAGCAGGAGCTGCGCCAGGGTGTGAAGAAGCCTTTACCGAGGTCATCCGTGCCAACAT  
 CGGGGACGCACAGGCTATGGGGCAGAGGCCATCACCTTCTGCGCCAGTCTTGGCCCT  
 CTGTGTTAACCTGATCTTCTGAGCAGCCCAACTTCCCTGACGATGCCAAGAAAAGGGC  
 GGAGCGCATCTTGCAGGCGTGTGGGGCCACAGTCTGGGGCCTACAGCGTCAGCTCCGG  
 CATCCAGTGATCCGGGAGGACGTGGCGCGGTACATTGAGAGGCGTGACGGAGGCATCCC  
 TGCGGACCCCAACAACGTCTTCTGTCCACAGGGGCCAGCGATGCCATCGTGACGGTGCT  
 GAAGCTGCTGGTGGCCGGCAGGGCCACACACGCACGGGTGTGCTCATCCCCATCCCCA  
 GTACCCACTCTACTCGGCCACGCTGGCAGAGCTGGGCGCAGTGCAGGTGGATTACTCT  
 GGACGAGGAGCGTGCCTGGGCGTGGACGTGGCCGAGCTTACCCTGCATGGGCCAGGC  
 GCGTGACCACTGCCGCCCTCGTGCCTCTGTGTATCAACCTGGCAACCCACCAGGGCA  
 GGTGCAGACCCGCGAGTGCATCGAGGCCGTGATCCGCTTCGCTTCAAGAGCGGCTCTT  
 TCTGCTGGCGGACGAGGTGTACCAGGACAACGTGTACGCCGCGGGTTCGAGTTCCTACTC  
 ATCAAGAAGGTGCTCATGGAGATGGGGCCGCCCTACGCCGGGACAGCAGGAGCTTGCCCT  
 CTTCCACTCCACCTCAAAGGGCTACATGGGCGAGTGGGGTTCGCGGGCGGCTATGTGGA  
 GGTGGTGAACATGGACGCTGCAGTGCAGCAGCAGATGCTGAAGCTGATGAGTGTGCGGT  
 GTGCCCCCGGTGCCAGGACAGGCCCTGCTGGACTGGTGGTCAAGCCCGCCGCGCCAC  
 CGACCCCTCTTTGCGCAGTCCAGGCTGAGAAGCAGGCGAGTGCAGAGCTGGCGGCGC  
 CAAGGCCAAGCTCACCGAGCAGGTCTTCAATGAGGCTCCTGGCATCAGCTGCAACCCAGT  
 GCAGGGGCCATGTACTCTTCCGCGCGTGCAGTGCACCCCGGGCGGTGGAGCGCGC  
 TCAGGAGCTGGGCTGGCCCCGATATGTTCTTCTGCTGCGCTCCTGGAGGAGACCGG  
 CATCTGCGTGGTGCAGGGAGCGGCTTTGGGCAGCGGGAAGGCACCTACCACTTCCGGAT  
 GACCATCTGCCCCCTTGAGAAACTGCGGCTGCTGCTGGAGAAGCTGAGCAGGTTCCA  
 TGCCAAGTTCACCTCGAGTACTCTGAGCAGCCAGCTGGGGCCAGGCTGGTGCCTT  
 GGACTGTGTGCTCAGGAGCCCTGGGAGGCTCTGGAGCCACTGTACTTGTCTTGTATGCC  
 TGGCGGGGTGGGTGGGGGGGTGCTGGGCCCTGCCTCTGCAAGTCCCTAATAAAGC  
 TGTGTGGCAGTCTGACTCCAGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA  
 AAAAAAAAAA

**5' Read Nucleotide Sequence:** >OriGene 5' read for NM\_005309 unedited  
 GGTCAGAAATTTGTATACGACTCATATAGGGCGCGCGATTCCCGGGATATCGTCGACC  
 CACGCGTCCGAGGGCTGCCACTTGGACTCCCTTGGCAGGGGGCGGGCAGGGGCTGGCTCT  
 GCCTGGGGCCAGGCCATGTAACTGTGCCCCGGCCTGGGGCCAGAGGGGCAGGCCTG  
 CGCACGGGGAGGCTGTTGTGGCAGCGGAACAGAGACGTGCACGAGTCATGGCCTCGAGCA  
 CAGGTGACCGGAGCCAGGCGGTGAGGCATGGACTGAGGGCGAAGGTGCTGACGCTGGACG  
 GCATGAACCCGCGTGTGCGGAGAGTGGAGTACGCAGTGCCTGGCCCCATAGTGCAGCGAG  
 CCTTGGAGCTGGAGCAGGAGCTGCGCCAGGGTGTGAAGAAGCCTTTACCGAGGTCATCC  
 GTGCCAACATCGGGGACGCACAGGCTATGGGGCAGAGGCCATCACCTTCTGCGCCAGG  
 TCTTGGCCCTCTGTGTTAACCTGATCTTCTGAGCAGCCCAACTTCCCTGACGATGCCA  
 AGAAAAGGGCGGAGCGCATCTTGCAGGCGTGTGGGGCCACAGTCTGGGGCCTACAGCG  
 TCAGCTCCGGCATCCAGCTGATCCGGGAGGACGTGGCGCGGTACATTGAGAGGCGTGACG  
 GAGGCATCCCTGCGGACCCACAACGTCTTCTGTCCACAGGGGGCAGCGATGCCATCGT  
 GACGGTGTGAAGCTGCTGGTGGCCGGCAGGGCCACACACGCCCGGGTGTGCTCATCCC  
 CATCCCCAGTACCACTCTACTCGGCCAGCTGGCAGAGCTGGGCGCAGTGCAGGTGGA  
 TTACTACTGGACAAGGAGCGTGCCTGGGCGCCTGGACTTGGCCGAACCTACCGTGCAT  
 GGGCCAGGCGCGTGG

<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_005309
<b>Insert Size:</b>	1871 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>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>	<a href="#">NM_005309.1</a> , <a href="#">NP_005300.1</a>
<b>RefSeq Size:</b>	1924 bp
<b>RefSeq ORF:</b>	1491 bp
<b>Locus ID:</b>	2875
<b>UniProt ID:</b>	<a href="#">P24298</a>
<b>Cytogenetics:</b>	8q24.3
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Alanine, aspartate and glutamate metabolism, Metabolic pathways
<b>Gene Summary:</b>	This gene encodes cytosolic alanine aminotransaminase 1 (ALT1); also known as glutamate-pyruvate transaminase 1. This enzyme catalyzes the reversible transamination between alanine and 2-oxoglutarate to generate pyruvate and glutamate and, therefore, plays a key role in the intermediary metabolism of glucose and amino acids. Serum activity levels of this enzyme are routinely used as a biomarker of liver injury caused by drug toxicity, infection, alcohol, and steatosis. A related gene on chromosome 16 encodes a putative mitochondrial alanine aminotransaminase.[provided by RefSeq, Nov 2009]