

## Product datasheet for **SC320514**

### **GPT2 (NM\_133443) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GPT2 (NM_133443) Human Untagged Clone
Tag:	Tag Free
Symbol:	GPT2
Synonyms:	ALT2; GPT 2; MRT49; NEDSPM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene sequence for NM\_133443.1  
 CTAACCGAGTGCGGCGAGGGCCTACCAGGGGCGACAGGGTTTCTCTCCGCAAGCGCGCGA  
 TGCAGCGGGCGGGCGGCTGGTCCGGCGGGGCTGTGGTCCCCGGACCCCCAGCTCCTGGG  
 GCCGCAGCCAGAGCAGCGCGGCCCGGAGGCCCTCGGCGGTGCTCAAGGTGCGGCCCGAGC  
 GCAGCCGGCGCGAGCGCATCCTCACGCTGGAGTCCATGAACCCGAGGTGAAGGCGGTGG  
 AGTACGCCGTGCGGGGACCCATCGTCTCAAGGCCGCGAGATCGAGCTCGAGCTGCAGC  
 GGGGTATCAAAAAGCCATTACAGAGGTATCCGAGCCAACATCGGGGACGCCAGGCTA  
 TGGGGCAGCAGCCAATCACCTTCTCCGGCAGGTGATGGCACTATGCACCTACCCAAACC  
 TGCTGGACAGCCCCAGCTTCCCAGAAGATGCTAAGAAACGTGCCCGCGGATCCTGCAGG  
 CTTGTGGCGGGAACAGCCTGGGGTCTACAGTGCTAGCCAGGGTGTCAACTGCATCCGTG  
 AAGATGTGGTGCCTACATCACCAGGAGGGATGGCGGTGTGCTGCGGACCCCGACAACA  
 TCTACCTGACCACGGGAGCTAGTGACGGCATTCTACGATCCTGAAGATCCTCGTCTCCG  
 GGGCGGCAAGTCACGGACAGGTGTGATGATCCCATCCCACAATATCCCCTCTATTTCAG  
 CTGTCTCTCTGAGCTCGACCCATCCAGGTGAATTAACCTGGACGAGGAGAAGTCTGCT  
 GGGCGCTGAATGTGAATGAGCTCCGGCGGGCGGTGCAGGAGGCCAAGACCACTGTGATC  
 CTAAGGTGCTCTGCATAATCAACCCTGGGAACCCACAGGCCAGGTACAAGCAGAAAGT  
 GCATAGAAGATGTGATCCACTTTGCCTGGGAAGAGAAGCTCTTTCTCCTGGCTGATGAGG  
 TGTACCAGGACAACGTGTACTCTCCAGATTGCAGATTCCACTCCTTCAAGAAGGTGCTGT  
 ACGAGATGGGGCCCGAGTACTCCAGCAACGTGGAGCTCGCTCCTTCCACTCCACCTCCA  
 AGGGCTACATGGGCGAGTGTGGTTACAGAGGAGGCTACATGGAGGTGATCAACCTGCACC  
 CTGAGATCAAGGGCCAGCTGGTGAAGTGTGTGCGGTGCGCCTGTGCCCCCAGTGTCTG  
 GGCAGGCCGCCATGGACATTGTCGTGAACCCCCGGTGGCAGGAGAGGAGTCTTTGAGC  
 AATTCAGCCGAGAGAAGGAGTCCGTCTGGTAATCTGGCCAAAAAGCAAAGCTGACGG  
 AAGACCTGTTTAAACCAAGTCCCAGGAATTAACCTGCAACCCCTTGCAGGGGCCATGTACG  
 CCTTCCCTCGGATCTTATTCTGCCAAAAGCTGTGGAGGCTGCTCAGGCCATCAATGG  
 CTCCAGACATGTTCTACTGCATGAAGCTCCTGGAGGAGACTGGCATCTGTGTCGTGCCCCG  
 GCAGTGGCTTTGGGCAGAGGGAAGGCATTACCACTTCAGGATGACTATCCTCCCTCCAG  
 TGGAGAAGCTGAAAACGGTGTGTCAGAAGGTGAAAGACTTCCACATCAACTTCTGGAGA  
 AGTACGCGTGAGGACGCCTGAGCCCCAGCGGGAGACCTGTCTTGGCTCTTCTCCCAAT  
 GCCCGTACAGGCTGAACCTCGCTCCCCGTGACTCTGCCTCGGGCCTCGCAGAGGCCGCTG  
 GTCACCTCGTCATCATTTTGGCCCTGGAGACGTCTTTCTTGTGCCTTGATGTTGAGAGC  
 GCCTCTCTTTGAGCAAACAAGCATTCTATATGCAACCAGAGTAGAGGGGACCTGCTCAG  
 CAGGTGTGACCAGGGTTCTCTGAATCTGTTATTGTTTTGCTTCTGAAAAGTTCAATTTGG  
 GTTTTACAACAACCTAGGATGTGTTGGGTGAGATGTTTCAGATCTGGAGAAATGAGCAGGT  
 GTCGGGAAATGTGTGACTTAACCGTGGTGGGGCTGGAATCCAAACTCACCACCATGAT  
 CTGTGAAATAAAGCCCTTAGCGGTGTGAAAAAAAAAAAAAAAAAAAA

**Restriction Sites:** Please inquire

**ACCN:** NM\_133443

**OTI Disclaimer:** 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).

**OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

**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).

<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>NM_133443.1, NP_597700.1</u>
<b>RefSeq Size:</b>	3957 bp
<b>RefSeq ORF:</b>	1572 bp
<b>Locus ID:</b>	84706
<b>UniProt ID:</b>	<u>Q8TD30</u>
<b>Cytogenetics:</b>	16q11.2
<b>Domains:</b>	aminotran_1_2
<b>Protein Pathways:</b>	Alanine, aspartate and glutamate metabolism, Metabolic pathways
<b>Gene Summary:</b>	<p>This gene encodes a mitochondrial alanine transaminase, a pyridoxal enzyme that catalyzes the reversible transamination between alanine and 2-oxoglutarate to generate pyruvate and glutamate. Alanine transaminases play roles in gluconeogenesis and amino acid metabolism in many tissues including skeletal muscle, kidney, and liver. Activating transcription factor 4 upregulates this gene under metabolic stress conditions in hepatocyte cell lines. A loss of function mutation in this gene has been associated with developmental encephalopathy. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Apr 2015]</p> <p>Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).</p>