

## Product datasheet for **RC209119**

### **GPT2 (NM\_133443) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GPT2 (NM_133443) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GPT2
Synonyms:	ALT2; GPT 2; MRT49; NEDSPM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC209119 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCAGCGGGCGGCCGCTGGTCCGGCGGGCTGTGGTCCCGGACCCAGCTCCTGGGGCCGACGCC  
 AGAGCAGCGCGGCCGCCAGGCCTCGGCCGTGCTCAAGGTGCGGCCAGCGCAGCCGGCGGAGCGCAT  
 CCTCACGCTGGAGTCCATGAACCCGAGGTGAAGGCGGTGGAGTACGCCGTGCGGGGACCCATCGTGCTC  
 AAGCCCGCGAGATCGAGCTCGAGCTGCAGCGGGTATCAAAAAGCCATTACAGAGGTATCCGAGCCA  
 ACATCGGGGACGCCAGGCTATGGGGCAGCAGCCAATCACCTTCTCCGGCAGGTGATGGCACTATGCAC  
 CTACCCAAACCTGCTGGACAGCCCCAGCTTCCAGAAGATGCTAAGAAACGTGCCGGCGGATCCTGCAG  
 GCTTGTGGCGGGAACAGCCTGGGGTCTACAGTGTAGCCAGGGTGTCAACTGCATCCGTGAAGATGTGG  
 CTGCTACATCACCAGGAGGGATGGCGGTGTGCCTGCGGACCCCGACAACATCTACTGACCACGGGAGC  
 TAGTGACGGCATTCTACGATCCTGAAGATCCTCGTCTCCGGGGCGGCAAGTACAGGACAGGTGTGATG  
 ATCCCATCCACAATATCCCTCTATTAGCTGTCATCTCTGAGCTCGACGCCATCCAGGTGAATTACT  
 ACCTGGACGAGGAGAAGTCTGGGCGTGAATGTGAATGAGTCCGGCGGGCGGTGCAGGAGGCCAAAGA  
 CCACTGTGATCCTAAGGTGCTCTGCATAATCAACCCTGGGAACCCACAGGCCAGGTACAAGCAGAAAAG  
 TGCATAGAAGATGTGATCCACTTTGCTGGGAAGAGAAGCTCTTTCTCCTGGCTGATGAGGTGTACCAGG  
 ACAACGTGACTCTCCAGATTGCAGATTCCACTCCTTCAAGAAGGTGCTGTACGAGATGGGGCCCGAGTA  
 CTCCAGCAACGTGGAGCTCGCTCCTCCACTCCACTCCAAGGGCTACATGGGCGAGTGTGGTTACAGA  
 GGAGGCTACATGGAGGTGATCAACCTGCACCCTGAGATCAAGGGCCAGCTGGTGAAGCTGCTGCGGTGC  
 GCCTGTGCCCCCAAGTGTCTGGGCAGGCCCATGGACATTGTCTGTAACCCCGGTGGCAGGAGAGGA  
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 GAAGACCTGTTTAACCAAGTCCCAGGAATTCAGTCAACCCCTTGCAGGGGGCCATGTACGCTTCCCTC  
 GGATCTTCATTCTGCCAAAGCTGTGGAGGCTGCTCAGGCCCATCAAATGGCTCCAGACATGTTCTACTG  
 CATGAAGCTCCTGGAGGAGACTGGCATCTGTGTCGTGCCCGCAGTGGCTTTGGGAGAGGGAAGGCACT  
 TACCATTGAGGATGACTATCCTCCCTCCAGTGGAGAAGCTGAAAACGGTGTGCAGAAGGTGAAAGACT  
 TCCACATCAACTCCTGGAGAAGTACGCC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC209119 protein sequence  
 Red=Cloning site Green=Tags(s)

MQRRAALVRRGCGPRTPSSWGRSQSSAAAEASAVLKVRPERSRRERILTLESMPQVKAVEYAVRGPVIL  
 KAGEIELELQRGIKPPFTEVIRANIGDAQMGGQPIITFLRQVMALCTYPNLLDPSFPEDAKKRARRILQ  
 ACGGNSLGSYSASQGVNCIREDVAAYITRRDGGVPADPDNIYLTGASDGI STLKILVSGGKSRGTVM  
 IPIQYPLYSAVISSELDIQVNYLDEENCWALNVNELRRAVQEAKDHCDPKVLCIINPGNPTGQVQSRK  
 CIEDVIHFAWEEKLFLLADEVYQDNVYSPDCRFHFSFKVLYEMGPEYSSNVELASFHSTSKGYMGECCYR  
 GGYMEVINLHPEIKGQLVKLLSVRLCPPVSGQAAMDIVVNPVAGEESFEQFSREKESVLGNLAKKAKLT  
 EDLFNQVPGIHCNPLQGAMYAFPRIFIPAKAVEAAQAHQMAPDMFYCMKLLLEETGICVVPVGSFGQREGT  
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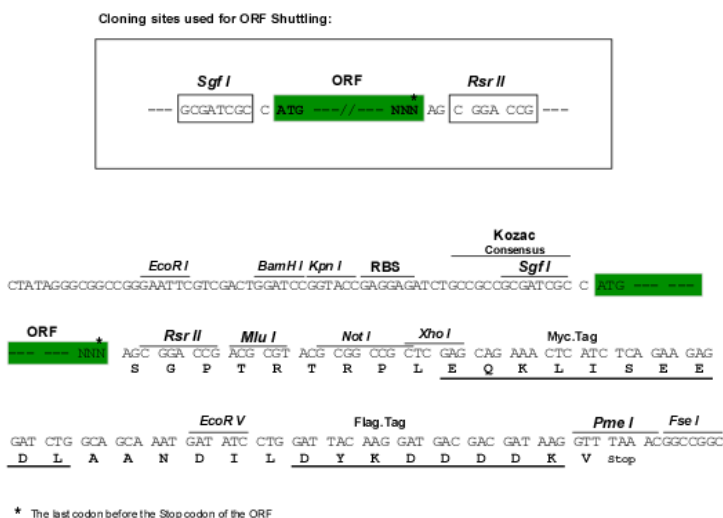
**SGP**TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6222\\_a07.zip](https://cdn.origene.com/chromatograms/mk6222_a07.zip)

**Restriction Sites:**

Sgfl-RsrII

**Cloning Scheme:**


**ACCN:** NM\_133443

**ORF Size:** 1569 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_133443.4](#)

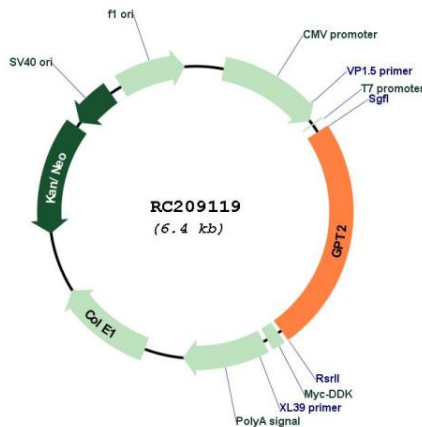
**RefSeq Size:** 3963 bp

**RefSeq ORF:** 1572 bp

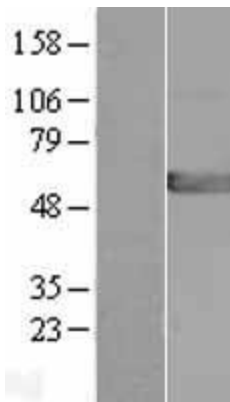
**Locus ID:** 84706

**UniProt ID:** [Q8TD30](#)  
**Cytogenetics:** 16q11.2  
**Domains:** aminotran\_1\_2  
**Protein Pathways:** Alanine, aspartate and glutamate metabolism, Metabolic pathways  
**MW:** 57.9 kDa  
**Gene Summary:** 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]

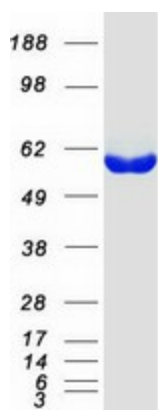
### Product images:



Circular map for RC209119



Western blot validation of overexpression lysate (Cat# [LY408784]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209119 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GPT2 protein (Cat# [TP309119]). The protein was produced from HEK293T cells transfected with GPT2 cDNA clone (Cat# RC209119) using MegaTran 2.0 (Cat# [TT210002]).