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Product datasheet for RC226830

GPT2 (NM_001142466) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GPT2 (NM_001142466) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GPT2
Synonyms:	ALT2; GPT 2; MRT49; NEDSPM
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

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ORF Nucleotide Sequence:

>RC226830 representing NM_001142466
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCAGCGGGCGGCGGCGCTGGTCCGGCGGGGCTGTGGTCCCCGGACCCCCAGCTCCTGGGGCCGCAGCC
AGAGCAGCGCGGCCGCCGAGGCCTCGGCGGTGCTCAAGGTGCGGCCCGAGCGCAGCCGGCGCGAGCGCAT
CCTCACGCTGGAGTCCATGAACCCGCAGGTGAAGGCGGTGGAGTACGCCGTGCGGGGACCCATCGTGCTC
AAGGCCGGCGAGATCGAGCTCGAGCTGCAGCGGGGTATCAAAAAGCCATTCACAGAGGTCATCCGAGCCA
ACATCGGGGACGCCCAGGCTATGGGGCAGCAGCCAATCACCTTCCTCCGGCAGGTGATGGCACTATGCAC
CTACCCAAACCTGCTGGACAGCCCCAGCTTCCCAGAAGATGCTAAGAAACGTGCCCGGCGGATCCTGCAG
GCTTGTGGCGGGAACAGCCTGGGGTCCTACAGTGCTAGCCAGGGTGTCAACTGCATCCGTGAAGATGTGG
CTGCCTACATCACCAGGAGGGATGGCGGTGTGCCTGCGGACCCCGACAACATCTACCTGACCACGGGAGC
TAGTGACGGCATTTCTACGATCCTGAAGATCCTCGTCTCCGGGGGCGGCAAGTCACGGACAGGTGTGATG
ATCCCCATCCCACAATATCCCCTCTATTCAGCTGTCATCTCTGAGCTCGACGCCATCCAGGTGAATTACT
ACCTGGACGAGGAGAACTGCTGGGCGCTGAATGTGAATGAGCTCCGGCGGGCGGTGCAGGAGGCCAAAGA
CCACTGTGATCCTAAGGTGCTCTGCATAATCAACCCTGGGAACCCCACAGGCCAGGTACAAAGCAGAAAG
TGCATAGAAGATGTGATCCACTTTGCCTGGGAAGAGAAGCTCTTTCTCCTGGCTGATGAGGTGTACCAGG
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CTCCAGCAACGTGGAGCTCGCCTCCTTCCACTCCACCTCCAAGGGCTACATGGGCGAGTGTGGTTACAGA
GGAGGCTACATGGAGGTGATCAACCTGCACCCTGAGATCAAGGGCCAGCTGGTGAAGCTGCTGTCGGTGC
GCCTGTGCCCCCCAGTGTCTGGGCAGGCCGCCATGGACATTGTCGTGAACCCCCCGGTGGCAGGAGAGGA
GTCCTTTGAGCAATTCAGCCGAGAGAAGGAGTCGGTCCTGGGTAATCTGGCCAAAAAAGCAAAGCTGACG
GAAGACCTGTTTAACCAAGTCCCAGGAATTCACTGCAACCCCTTGCAGGGGGCCATGTACGCCTTCCCTC
GGATCTTCATTCCTGCCAAAGCTGTGGAGGCTGCTCAGGCCCATCAAATGGCTCCAGACATGTTCTACTG
CATGAAGCTCCTGGAGGAGACTGGCATCTGTGTCGTGCCCGGCAGTGGCTTTGGGCAGAGGGAAGGCACT
TACCACTTCAGGATGACTATCCTCCCTCCAGTGGAGAAGCTGAAAACGGTGCTGCAGAAGGTGAAAGACT
TCCACATCAACTTCCTGGAGAAGT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

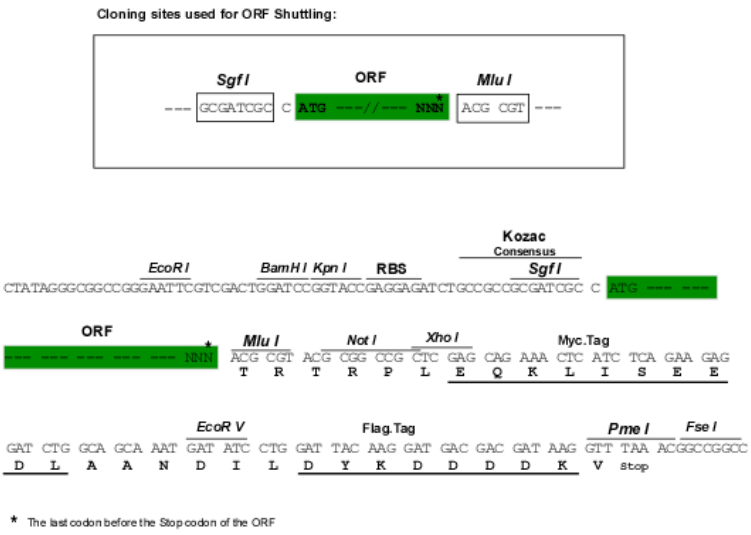
>RC226830 representing NM_001142466
Red=Cloning site Green=Tags(s)

MQRAAALVRRGCGPRTPSSWGRSQSSAAAEASAVLKVRPERSRRERILTLESMNPQVKAVEYAVRGPIVL
KAGEIELELQRGIKKPFTEVIRANIGDAQAMGQQPITFLRQVMALCTYPNLLDSPSFPEDAKKRARRILQ
ACGGNSLGSYSASQGVNCIREDVAAYITRRDGGVPADPDNIYLTTGASDGISTILKILVSGGGKSRTGVM
IPIPQYPLYSAVISELDAIQVNYYLDEENCWALNVNELRRAVQEAKDHCDPKVLCIINPGNPTGQVQSRK
CIEDVIHFAWEEKLFLLADEVYQDNVYSPDCRFHSFKKVLYEMGPEYSSNVELASFHSTSKGYMGECGYR
GGYMEVINLHPEIKGQLVKLLSVRLCPPVSGQAAMDIVVNPPVAGEESFEQFSREKESVLGNLAKKAKLT
EDLFNQVPGIHCNPLQGAMYAFPRIFIPAKAVEAAQAHQMAPDMFYCMKLLEETGICVVPGSGFGQREGT
YHFRMTILPPVEKLKTVLQKVKDFHINFLEK

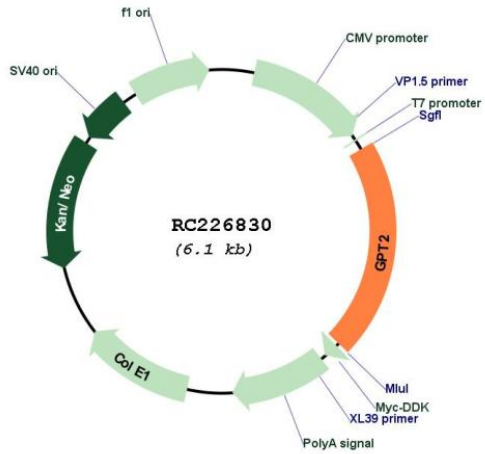
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_001142466
ORF Size:	1564 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_001142466.1, NM_001142466.2, NP_001135938.1
RefSeq Size:	3879 bp
RefSeq ORF:	1272 bp
Locus ID:	84706
UniProt ID:	Q8TD30
Cytogenetics:	16q11.2
Protein Pathways:	Alanine, aspartate and glutamate metabolism, Metabolic pathways
MW:	57.7 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]