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Product datasheet for RC201144

Phosphoribosyl pyrophosphate amidotransferase (PPAT) (NM_002703) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Phosphoribosyl pyrophosphate amidotransferase (PPAT) (NM_002703) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Phosphoribosyl pyrophosphate amidotransferase
Synonyms:	ATASE; GPAT; PRAT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC201144 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAGCTGGAGGAGTTGGGGATCCGAGAGGAATGTGGCGTGTTCGGGTGCATCGCCTCAGGAGAGTGGC
CCACGCAGCTGGATGTACCGCATGTGATCACTCTGGGACTCGTGGGGCTGCAGCACCGGGGTCAGGAGAG
TGCTGGTATTGTGACTAGTGATGGGAGTTCCGTGCCAACATTCAAATCACACAAGGGAATGGGTCTTGTA
AATCACGTCTTTACTGAAGACAATTTGAAAAAATTATATGTTTCAAATCTTGGAATTGGACACACCAGGT
ATGCCACCACAGGAAAATGTGAACTAGAAAATTGTCAGCCCTTCGTTGTTGAAACACTTCATGGGAAGAT
AGCTGTGGCACATAATGGCGAATTGGTAAATGCTGCTCGATTAAGGAAAAAGCTTCTGCGTCATGGTATT
GGTCTGTCTACAAGTTCTGATAGTGAAATGATTACCCAGTTACTGGCGTATACCCCTCCTCAGGAACAAG
ATGACACCCCAGACTGGGTAGCCAGGATTAAAAACTTGATGAAGGAAGCACCCACAGCATACTCCCTGCT
TATAATGCACAGAGATGTTATTTATGCAGTACGAGATCCTTATGGAAATCGTCCCTTATGCATTGGTCGT
CTTATTCCAGTGTCTGATATAAATGACAAAGAGAAAAAAACATCAGAAACAGAAGGATGGGTGGTGTCTT
CAGAATCTTGTAGCTTCTTATCTATTGGTGCAAGATATTACCGTGAAGTCTTGCCTGGAGAAATTGTGGA
AATATCCAGACACAATGTCCAAACTCTTGATATTATATCAAGGTCTGAAGGAAACCCAGTGGCTTTTTGT
ATCTTTGAATATGTTTATTTTGCAAGACCAGACAGTATGTTCGAAGACCAAATGGTTTATACAGTAAGAT
ACCGTTGTGGCCAGCAGCTAGCGATTGAAGCACCTGTGGATGCAGATTTGGTTAGCACTGTTCCAGAATC
TGCTACGCCTGCTGCTCTTGCTTACGCAGGAAAGTGTGGACTTCCATATGTGGAGGTGCTGTGTAAAAAC
CGGTATGTAGGGAGAACCTTCATTCAGCCAAACATGAGGTTAAGACAACTTGGTGTTGCAAAAAAATTTG
GAGTATTGTCAGACAACTTTAAAGGCAAAAGAATTGTTCTTGTAGATGATTCAATTGTCAGAGGCAATAC
CATCTCACCTATAATAAAACTGCTCAAAGAATCTGGTGCAAAAGAGGTACACATTCGAGTAGCTTCACCA
CCAATTAAATATCCATGCTTCATGGGAATAAACATTCCTACAAAAGAAGAGCTCATTGCCAATAAACCAG
AATTTGATCACCTTGCAGAATATCTAGGAGCAAACAGTGTTGTGTATCTGTCAGTAGAAGGACTGGTTTC
ATCTGTACAAGAAGGGATAAAGTTTAAAAAACAGAAAGAGAAAAAGCACGATATTATGATCCAAGAAAAT
GGAAATGGTCTGGAATGTTTTGAAAAGAGTGGTCATTGTACAGCTTGTCTCACTGGAAAATATCCTGTAG
AATTAGAATGG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC201144 protein sequence
Red=Cloning site Green=Tags(s)

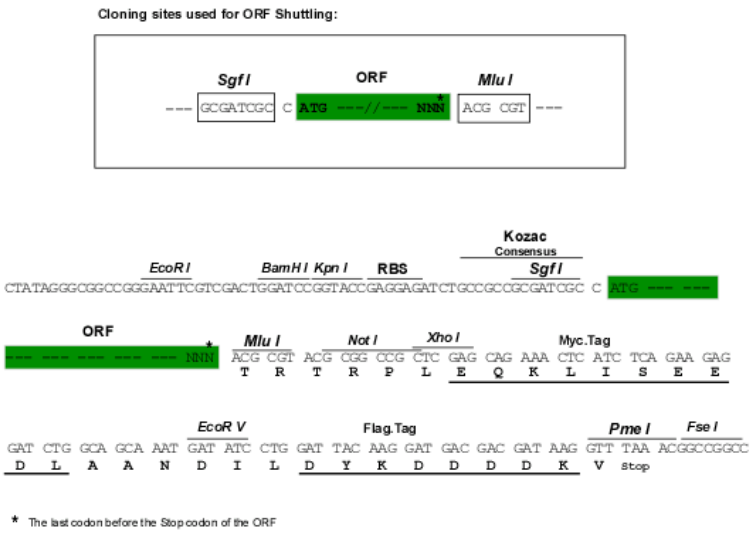
MELEELGIREECGVFGCIASGEWPTQLDVPHVITLGLVGLQHRGQESAGIVTSDGSSVPTFKSHKGMGLV
NHVFTEDNLKKLYVSNLGIGHTRYATTGKCELENCQPFVVETLHGKIAVAHNGELVNAARLRKKLLRHGI
GLSTSSDSEMITQLLAYTPPQEQDDTPDWVARIKNLMKEAPTAYSLLIMHRDVIYAVRDPYGNRPLCIGR
LIPVSDINDKEKKTSETEGWVVSSESCSFLSIGARYYREVLPGEIVEISRHNVQTLDIISRSEGNPVAFC
IFEYVYFARPDSMFEDQMVYTVRYRCGQQLAIEAPVDADLVSTVPESATPAALAYAGKCGLPYVEVLCKN
RYVGRTFIQPNMRLRQLGVAKKFGVLSDNFKGKRIVLVDDSIVRGNTISPIIKLLKESGAKEVHIRVASP
PIKYPCFMGINIPTKEELIANKPEFDHLAEYLGANSVVYLSVEGLVSSVQEGIKFKKQKEKKHDIMIQEN
GNGLECFEKSGHCTACLTGKYPVELEW

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6150_c02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002703

ORF Size: 1551 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_002703.5

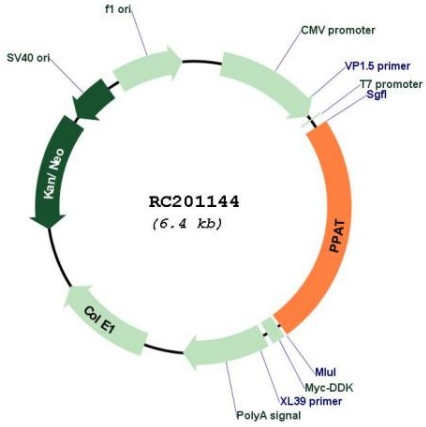
RefSeq Size: 3713 bp

RefSeq ORF: 1554 bp

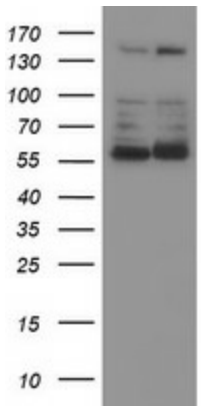
Locus ID: 5471

UniProt ID:	Q06203
Cytogenetics:	4q12
Domains:	GATase_2, Pribosyltran
Protein Families:	Druggable Genome, Protease
Protein Pathways:	Alanine, aspartate and glutamate metabolism, Metabolic pathways, Purine metabolism
MW:	57.4 kDa
Gene Summary:	The protein encoded by this gene is a member of the purine/pyrimidine phosphoribosyltransferase family. It is a regulatory allosteric enzyme that catalyzes the first step of de novo purine nucleotide biosythetic pathway. This gene and PAICS/AIRC gene, a bifunctional enzyme catalyzing steps six and seven of this pathway, are located in close proximity on chromosome 4, and divergently transcribed from an intergenic region. [provided by RefSeq, Mar 2011]

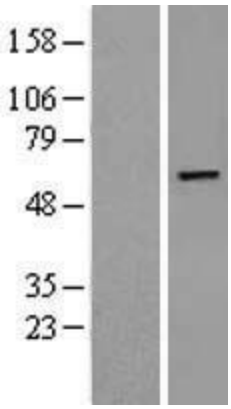
Product images:



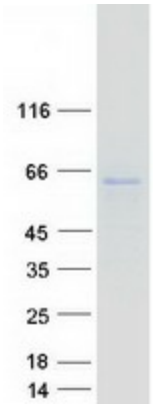
Circular map for RC201144



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PPAT (Cat# RC201144, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PPAT(Cat# [TA504769]). Positive lysates [LY400951] (100ug) and [LC400951] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400951]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201144 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PPAT protein (Cat# [TP301144]). The protein was produced from HEK293T cells transfected with PPAT cDNA clone (Cat# RC201144) using MegaTran 2.0 (Cat# [TT210002]).