

Product datasheet for **RC207225**

GFPT1 (NM_002056) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GFPT1 (NM_002056) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GFPT1
Synonyms:	CMS12; CMSTA1; GFA; GFAT; GFAT 1; GFAT1; GFAT1m; GFPT; GFPT1L; MSLG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC207225 representing NM_002056
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTGTGGTATATTTGCTTACTTAACTACCATGTTCTCGAACGAGACGAGAAATCCTGGAGACCCTAA
 TCAAAGGCCTTCAGAGACTGGAGTACAGAGGATATGATTCTGCTGGTGTGGGATTTGATGGAGGCAATGA
 TAAAGATTGGGAAGCCAATGCCTGCAAAATCCAGCTTATTAAGAAGAAAGGAAAAGTTAAGGCACTGGAT
 GAAGAAGTTCACAAGCAACAAGATATGGATTTGGATATAGAATTTGATGTACACCTTGGAAATAGCTCATA
 CCCGTTGGGCAACACATGGAGAACCAGTCTGTCAATAGCCACCCCGAGCGCTCTGATAAAAAATAATGA
 ATTTATCGTTATTCACAATGGAATCATCACCACTACAAAGACTTGAAAAAGTTTTGGAAAGCAAAGGC
 TATGACTTCGAATCTGAAACAGACACAGAGACAATTGCCAAGCTCGTTAAGTATATGTATGACAATCGGG
 AAAGTCAAGATACCAGCTTTACTACCTTGGTGGAGAGAGTTATCCAACAATTGGAAGGTGCTTTTGCCT
 TGTGTTTTAAAAGTGTTCATTTTCCGGGCAAGCAGTTGGCACAAGGCGAGGTAGCCCTCTGTTGATTGGT
 GTACGGAGTGAACATAAACTTTCTACTGATCACATTCTATACTCTACAGAACAGGCAAAGACAAGAAAG
 GAAGCTGCAATCTCTCTCGTGTGGACAGACAACCTGCCTTTTCCGGTGGAAAGAAAAGCAGTGGAGTA
 TTACTTTGCTTCTGATGCAAGTCTGTATAGAACACACCAATCGCGTCACTTTCTGGAAGATGATGAT
 GTTGCAGCAGTAGTGGATGGACGCTTTTCTATCCATCGAATTAACGAACTGCAGGAGATCACCCCGGAC
 GAGCTGTGCAAACTCCAGATGGAACCTCCAGCAGATCATGAAGGGCAACTTCAGTTCATTTATGCAGAA
 GAAATATTTGAGCAGCCAGAGTCTGTCGTGAACACAATGAGAGGAAGAGTCAACTTTGATGACTATACT
 GTGAATTTGGGTGGTTGAAGGATCACATAAAGGAGATCCAGAGATGCCGGCGTTTGATTCTTATTGCTT
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 GGTGGAACCTAGCAAGTGACTTCTGGACAGAAACACACCAGTCTTTCGAGATGATGTTTGCCTTTTCCTT
 AGTCAATCAGGTGAGACAGCAGATACTTTGATGGGTCTTCGTTACTGTAAGGAGAGAGGAGCTTTAACTG
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 TCCTGAGATTGGTGTGGCCAGTACAAAGGCTTATACCAGCCAGTTTGTATCCCTTGTGATGTTTGCCTT
 ATGATGTGTGATGATCGGATCTCCATGCAAGAAAGACGCAAGAGATCATGCTTGGATTGAAACGGCTGC
 CTGATTTGATTAAGGAAGTACTGAGCATGGATGACGAAATTCAGAACTAGCAACAGAATTTATCATCA
 GAAGTCAGTTCTGATAATGGGACGAGGCTATCATTATGCTACTTGTCTTGAAGGGGCACTGAAAATCAA
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 ATAAATTGATGCCTGTGATCATGATCATGAGAGATCACACTTATGCCAAGTGTGAGAATGCTTTCA
 GCAAGTGGTTGCTCGGCAGGGGGCGCCTGTGGTAAATTTGTGATAAGGAGGATACTGAGACCATTAAGAAC
 ACAAAAAGAACGATCAAGGTGCCCACTCGGTGGACTGCTTGCAGGGCATTCTCAGCGTGTATCCCTTTAC
 AGTTGCTGGCTTCCACCTTGTGTGCTGAGAGGCTATGATGTTGATTTCCACGGAAATCTTGCCAAATC
 TGTGACTGTAGAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC207225 representing NM_002056
Red=Cloning site Green=Tags(s)

MCGIFAYLNYHVPRTREILETLIKGLQRLEYRGYDSAGVGFDDGNDKDWEANACKIQLIKKKGKVKALD
 EEVHKQQDMDLDIEFDVHLGIAHTRWATHGEPSPVNSHPQRSKDNNEFIVIHNGIITNYKDLKKFLESKG
 YDFESETDTETIAKLVKMYDNRRESQDTSFTTLVERVIQQLEGAFALVFKSVHFPQAVGTRRGSPLLI
 VRSEHKLSTDHIPILYRTGKDKKGGSCNLSRVDSSTCLFPVEEKAVEYFFASDASAVIEHTNRVIFLEDD
 VAAVVDGRLSIHRIKRTAGDHPGRAVQTLQMEQLQIMKGNFSSFMQKEIFEQPESVVNTMRGRVNFDDYT
 VNLGGLKDHAIKEIQRCLRLILACGTSYHAGVATRQVLEELTELPVMVELASDFLDRNTPVFRDDVCFLL
 SQSGETADTLMGLRYCKERGALTVGITNTVGSISRETDCGVHINAGPEIGVASTKAYTSQFVSLVMFAL
 MDCDDRISMQRERKEIMLGLKRLPDLIKEVLSMDDEIQKLATEL YHQKSVLIMGRGYHYATCLEGALKIK
 EITYMHSEGILAGELKHGPLALVDKLPVIMIIMRDHTYAKCQNALQQVVARQGRPVVICDKEDTETIKN
 TKRTIKVPHSVDCLOGILSVIPLQLLAFHLAVLRGYDVFPRNLAKSVTVE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_002056

ORF Size: 2043 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_002056.4](#)

RefSeq Size: 3082 bp

RefSeq ORF: 2046 bp

Locus ID: 2673

UniProt ID: [Q06210](#)

Cytogenetics: 2p13.3

Domains: GATase_2, SIS

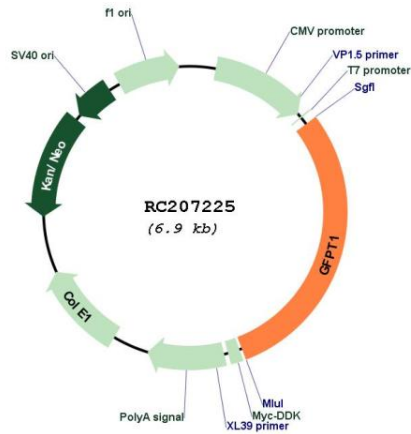
Protein Families: Protease

Protein Pathways: Alanine, aspartate and glutamate metabolism, Amino sugar and nucleotide sugar metabolism, Metabolic pathways

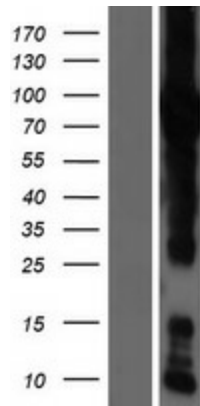
MW: 76.6 kDa

Gene Summary: This gene encodes the first and rate-limiting enzyme of the hexosamine pathway and controls the flux of glucose into the hexosamine pathway. The product of this gene catalyzes the formation of glucosamine 6-phosphate. [provided by RefSeq, Sep 2008]

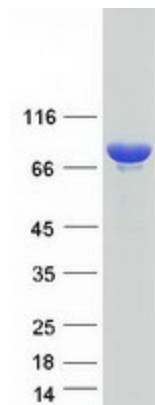
Product images:



Circular map for RC207225



Western blot validation of overexpression lysate (Cat# [LY419564]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207225 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GFPT1 protein (Cat# [TP307225]). The protein was produced from HEK293T cells transfected with GFPT1 cDNA clone (Cat# RC207225) using MegaTran 2.0 (Cat# [TT210002]).