

Product datasheet for **RC206043**

PFKFB3 (NM_004566) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PFKFB3 (NM_004566) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PFKFB3
Synonyms:	iPFK-2; IPFK2; PFK2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC206043 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCGTTGGAAGTACGCAGAGCCGAGTGCAGAAGATCTGGGTGCCCGTGGACCACAGGCCCTCGTTGC
 CCAGATCCTGTGGGCCAAGCTGACCAACTCCCCACCGTCATCGTCATGGTGGGCCTCCCCGCCGGGG
 CAAGACCTACATCTCAAGAAGCTGACTCGCTACCTCAACTGGATTGGCGTCCCCACAAAAGTGTCAAC
 GTCGGGGAGTATCGCCGGGAGGCTGTGAAGCAGTACAGCTCTACAACCTCTCCGCCCCGACAATGAGG
 AAGCCATGAAAGTCCGGAAGCAATGTGCCTTAGCTGCCTGAGAGATGTCAAAGCTACCTGGCGAAAGA
 AGGGGGACAAATTGCGGTTTTTCGATGCCACCAATACTACTAGAGAGAGGAGACACATGATCCTTCATTTT
 GCCAAAGAAAATGACTTTAAGGCGTTTTTCATCGAGTCGGTGTGCGACGACCCTACAGTTGTGCCCTCCA
 ATATCATGGAAGTAAAACTCCAGCCCGATTACAAAGACTGCAACTCGGCAGAAGCCATGGACGACTT
 CATGAAGAGGATCAGTTGCTATGAAGCCAGCTACCAGCCCTCGACCCGACAAATGCGACAGGGACTTG
 TCCTGATCAAGGTGATTGACGTGGGCCGAGGTTCTGGTGAACCGGGTGCAGGACCACATCCAGAGCC
 GCATCGTGTACTACCTGATGAACATCCAGTGCAGCCGCGTACCATCTACCTGTGCCGGCACGGCGAGAA
 CGAGCACAACTCCAGGGCCGCATCGGGGGCGACTCAGGCCTGTCCAGCCGGGGCAAGAAGTTTGCCAGT
 GCTCTGAGCAAGTTCGTGGAGGAGCAGAACCTGAAGGACCTGCGCGTGTGGACCAGCCAGCTGAAGAGCA
 CCATCCAGACGGCCGAGGCGCTGCGGCTGCCCTACGAGCAGTGAAGGCGCTCAATGAGATCGACGCGGG
 CGTCTGTGAGGAGCTGACCTACGAGGAGATCAGGGACCTACCTGAGGAGTATGCGCTGCGGGAGCAG
 GACAAGTACTATTACCGTACCCACCGGGGAGTCTACCAGGACCTGGTCCAGCGCTGGAGCCAGTGA
 TCATGGAGCTGGAGCGGCAGGAGAATGTCTGGTCACTGCCACCAGGCGCTCTGCGCTGCCTGTGCTGC
 CTACTTCTGGATAAGAGTGCAGAGGAGATGCCCTACCTGAAATGCCCTTTACACCGTCTGAAACTG
 ACGCCTGTGCTTATGGCTGCCGTGTGGAATCCATCTACCTGAACGTGGAGTCCGTCTGCACACCCGGG
 AGAGGTGAGAGGATGCAAAGAAGGGACCTAACCCGCTCATGAGACGCAATAGTGTACCCCGCTAGCCAG
 CCCCAGCCACCAAAAAGCCTCGCATCAACAGCTTTGAGGAGCATGTGGCTCCACCTCGGCCGCCCTG
 CCCAGTGCCTGCCCCGGAGGTGCCACGCAGCTGCCTGGACAAAACATGAAAGGCTCCCGGAGCAGCG
 CTGACTCCTCCAGGAAACAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC206043 protein sequence
 Red=Cloning site Green=Tags(s)

MPELQTQSRVQKIWVVDHRPSLPRSCGPKLTNSPTVIVMVGLPARGKTYISKLLTRYLNWIGVPTKVFN
 VGEYRREAVKQYSSYNFRPDNEAMKVRKQCALAALRDVKSYLEKEGGQIAVFDATNTTRERRHMLHF
 AKENDFKAFFIESVDDPTVVASNIMEVKISSPDYKDCNSAEAMDDFMKRISCYEASYQLDPDKDRDL
 SLIKVIDVGRFRFLVNRVQDHIQSRIVYYLMNIHVQPRTIYLCRHGENEHLQGRIGGDSGLSSRGKFFAS
 ALSKFVEEQNLKDLRVWTSQKSTIQTAELRPLPYEQWKALNEIDAGVCEELTYEEIRDTYPEEYALREQ
 DKYYYRYPTGESYQDLVQRLEPIMELERQENVLVICHQAVLRCLLAYFLDKSAEMPYKCPHVLTKL
 TPVAYGCRVESIYLNVESVCTHRERSEDAKKGPNPLMRRNSVTPLASPEPTKPRINSFEEHVASTSAAL
 PSCLPPEVPTQLPGQNMKGRSSADSSRKH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6134_a01.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_004566

ORF Size: 1560 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_004566.4](#)

RefSeq Size: 4553 bp

RefSeq ORF: 1563 bp

Locus ID: 5209

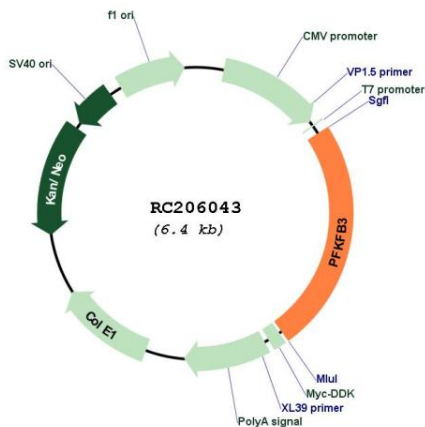
UniProt ID: [Q16875](#)

Cytogenetics: 10p15.1

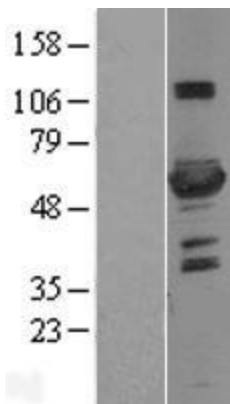
Domains: PGAM, 6PF2K
Protein Families: Druggable Genome
Protein Pathways: Fructose and mannose metabolism
MW: 59.6 kDa

Gene Summary: The protein encoded by this gene belongs to a family of bifunctional proteins that are involved in both the synthesis and degradation of fructose-2,6-bisphosphate, a regulatory molecule that controls glycolysis in eukaryotes. The encoded protein has a 6-phosphofructo-2-kinase activity that catalyzes the synthesis of fructose-2,6-bisphosphate (F2,6BP), and a fructose-2,6-biphosphatase activity that catalyzes the degradation of F2,6BP. This protein is required for cell cycle progression and prevention of apoptosis. It functions as a regulator of cyclin-dependent kinase 1, linking glucose metabolism to cell proliferation and survival in tumor cells. Several alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Apr 2016]

Product images:



Circular map for RC206043



Western blot validation of overexpression lysate (Cat# [LY401447]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206043 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).