

## Product datasheet for **RC227482**

### **PFKFB3 (NM\_001145443) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	PFKFB3 (NM_001145443) 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)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC227482 representing NM\_001145443  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCCCTTCAGGAAAGCCTGTGGGCCAAAGCTGACCAACTCCCCACCGTCATCGTCATGGTGGGCCTCC  
 CCGCCCGGGCAAGACCTACATCTCCAAGAAGCTGACTCGCTACCTCAACTGGATTGGCGTCCCCACAAA  
 AGTGTTCAACGTCGGGGAGTATCGCCGGGAGGCTGTGAAGCAGTACAGCTCCTACAACCTCTTCCGCCCC  
 GACAATGAGGAAGCCATGAAAGTCCGGAAGCAATGTGCCTTAGCTGCCTTGAAGAGATGTCAAAGCTACC  
 TGGCGAAAAGAAGGGGACAAATTGCGGTTTTTCGATGCCACCAATACTACTAGAGAGAGGAGACACATGAT  
 CCTTCATTTTCCAAAGAAAATGACTTTAAGGCGTTTTTTCATCGAGTCGGTGTGCGACGACCCTACAGTT  
 GTGGCCTCCAATATCATGGAAGTAAAACTCCAGCCCGATTACAAAGACTGCAACTCGGCAGAAGCCA  
 TGGACGACTTCATGAAGAGGATCAGTTGCTATGAAGCCAGCTACCAGCCCTCGACCCCGACAAATGCGA  
 CAGGGACTTGTGCTGATCAAGGTGATTGACGTGGGCCGGAGGTTCTTGGTGAACCGGGTGCAGGACCAC  
 ATCCAGAGCCGCATCGTGTACTACTGTGAACATCCACGTGCAGCCCGTACCATCTACCTGTGCCGGC  
 ACGGCGAGAACGAGCACAACTCCAGGGCCGCATCGGGGGCGACTCAGGCCTGTCCAGCCGGGGCAAGAA  
 GTTTGCCAGTGTCTGAGCAAGTTCGTGGAGGAGCAGAACCTGAAGGACCTGCGCGTGTGGACCAGCCAG  
 CTGAAGAGCACCATCCAGACGGCCGAGGCGCTGCGGCTGCCCTACGAGCAGTGAAGGCGCTCAATGAGA  
 TCGACGCGGGCGTCTGTGAGGAGCTGACCTACGAGGAGATCAGGGACACCTACCTGAGGAGTATGCGCT  
 GCGGGAGCAGGACAAGTACTATTACCGTACCCACCGGGGAGTCTACCAGGACCTGGTCCAGCGCTTG  
 GAGCCAGTGATCATGGAGCTGGAGCGGCAGGAAATGTGCTGGTCTCTGCCACCAGGCCGCTCTGCGCT  
 GACCTTGCTTGCCTACTTCTGGATAAGAGTGCAGAGGAGATGCCCTACCTGAAATGCCCTTCCACACCGT  
 CCTGAAACTGACGCTGTGCTTATGGCTGCCGTGGAATCCATCTACCTGAACGTGGAGTCCGCTCTGC  
 ACACACCGGGAGAGGTCAGAGGATGCAAAGAAGGGACCTAACCCGCTCATGAGACGCAATAGTGTACCC  
 CGCTAGCCAGCCCGAACCCACCAAAAAGCCTCGCATCAACAGCTTTGAGGAGCATGTGGCCTCCACCTC  
 GGCCGCCCTGCCAGCTGCCTGCCCCGGAGGTGCCACGCAGCTGCCTGGACAAAACATGAAAGGCTCC  
 CGGAGCAGCGCTGACTCTCCAGGAAACAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC227482 representing NM\_001145443  
 Red=Cloning site Green=Tags(s)

MPFRKACGPKLTNSPTVIMVGLPARGKTYISKKLTRYLNWIGVPTKVFNVGEYRREAVKQYSSYNFFRP  
 DNEEAMKVRKQCALAALRDVKSYLEKEGGQIAVFDATNTTRERRHMLHF AKENDFKAFFIESVCDPTV  
 VASNIMEVKISSPDYKDCNSAEAMDDFMKRI SCYEASYQLDPDKCDRDL SLIKVIDVGRRFLVNRVQDH  
 IQSRIVYYLMNIHVQPRTIYLCRHGENEHLQGRIGGDSGLSSRGKFFASALSKFVEEQNLKDLRVWTSQ  
 LKSTIQTAEALRLPYEQWKALNEIDAGVCEELTYEEIRDTYPEEYALREQDKYYRYPTGESYQDLVQRL  
 EPVIMELERQENLVICHQAVLRCLLAYFLDKSAEMPYLKCPHVLKLTTPVAYGCRVESIYLNVESVC  
 THRERSEDAKKGNPLMRRNSVTPLASPEPTKKPRINSFEEHVASTSAALPSCLPPEVPTQLPGQNMKGS  
 RSSADSSRKH

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk8063\\_f11.zip](https://cdn.origene.com/chromatograms/mk8063_f11.zip)

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_001145443

**ORF Size:** 1500 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\\_001145443.3](#)

**RefSeq ORF:** 1503 bp

**Locus ID:** 5209

**Cytogenetics:** 10p15.1

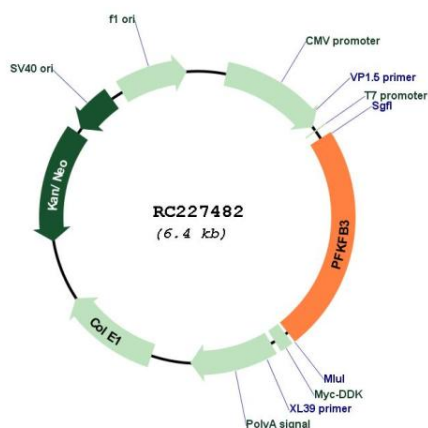
**Protein Families:** Druggable Genome

**Protein Pathways:** Fructose and mannose metabolism

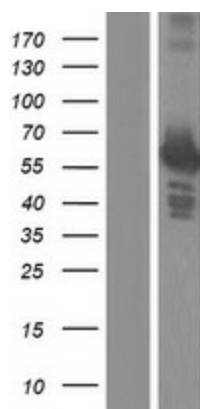
**MW:** 57.1 kDa

**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-bisphosphatase 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 RC227482



Western blot validation of overexpression lysate (Cat# [LY428890]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC227482 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).