

Product datasheet for **MG206400**

Pdk2 (NM_133667) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pdk2 (NM_133667) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Pdk2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG206400 representing NM_133667 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCGCTGGGTCCGGGCGCTGTTGAAGAATGCGTCCCTGGCAGGGGCACCCAAGTACATCGAGCACTTCA
GCAAGTTCTCCCGTCCCGTGTCCATGAAGCAGTTTCTAGACTTCGGATCCAGCAATGCCTGCGAGAA
GACGTCATTCACCTTCCCGCAGGAGCTGCCGTTGCGCTGGCCAACATCATGAAAGAGATCAACCTG
CTTCTGACCGAGTGTGGGCACCCCATCGGTGCAGCTGGTGCAGAGCTGGTATGTCCAGAGTCTGCTGG
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CACCATCCGGAACCGGCAACAATGACGTGGTGGCCACCATGGCACAGGGAGTGTGGAGTACAAGGACACC
TATGGAGATGACCCCGTCTCCAACCAGAACATCCAGTACTTCTGGACCGCTTCTACCTCAGCCGCATCT
CCATCCGAATGCTAATCAATCAACACACCCTCATCTTTGATGGCAGCACCAACCCAGCCACCCCAAACA
CATTGGCAGCATCGATCCCAACTGCAGCGTGTCTGATGTGGTGAAGACGCCTATGACATGGCTAAGCTC
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AGCCCATTCACATGGTCTATGTCCCTTCCCACCTGTACCACATGCTCTTTGAACCTTTAAGAATGCCAT
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GGCTTTGGGACAGATGCTGTCTATCTGAAGGCCCTGTCCACGGACTCAGTGGAGCGCCTGCCTGTCT
ACAACAAGTCTGCCTGGCGCCACTACCAGACCATCCAGGAGGCCGGCGACTGGTGTGTGCCAGCACAGA
GCCCAAGAACACATCGACGTATCGGGTCAGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG206400 representing NM_133667
 Red=Cloning site Green=Tags(s)

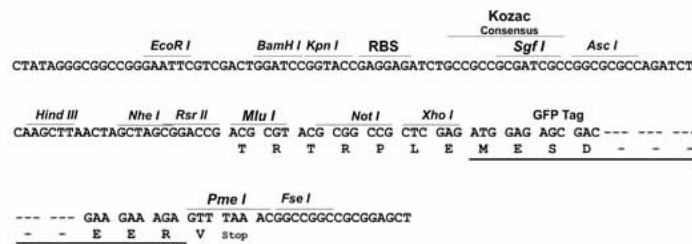
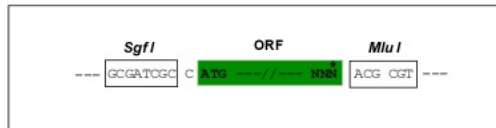
MRWVRALLKNASLAGAPKYIEHFSKFSPLSMKQFLDFGSSNACEKTSFTFLRQELPVRLANIMKEINL
 LPDRVLGTPSVQLVQSWYVQSLLDIMEFLDKDPEDHRTL SQFTDALVTIRNRHNDVVPTMAQGVLEYKDT
 YGDDPSVNQNIQYFLDRFYLSRISIRMLINQHTLIFDGSTNPAHPKHIGSIDPNCVSDVVKDAYDMAKL
 LCDKYMASPDLEIQEVNATNANQPIHMVYVPSHLYHMLFELFKNAMRATVESHESLTLPPIKIMVALG
 EEDLSIKMSDRGGVPLRKIERLFSYMYSTAPTQPQGTGTPLAGFGYGLPISRLYAKYFQDLQLFSME
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TRTRPLE - GFP Tag - V

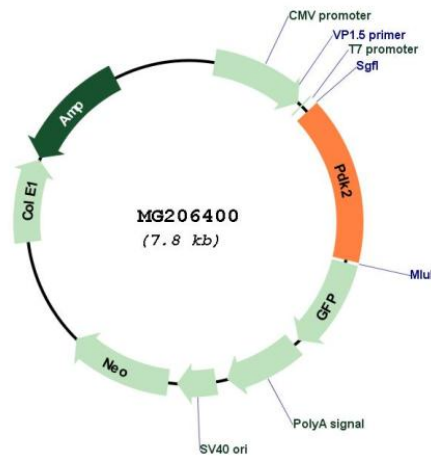
Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:



ACCN: NM_133667

ORF Size:	1221 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:	<ol style="list-style-type: none">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_133667.2
RefSeq Size:	2243 bp
RefSeq ORF:	1224 bp
Locus ID:	18604
UniProt ID:	Q9JK42
Cytogenetics:	11 59.01 cM
Gene Summary:	<p>Kinase that plays a key role in the regulation of glucose and fatty acid metabolism and homeostasis via phosphorylation of the pyruvate dehydrogenase subunits PDHA1 and PDHA2. This inhibits pyruvate dehydrogenase activity, and thereby regulates metabolite flux through the tricarboxylic acid cycle, down-regulates aerobic respiration and inhibits the formation of acetyl-coenzyme A from pyruvate. Inhibition of pyruvate dehydrogenase decreases glucose utilization and increases fat metabolism. Mediates cellular responses to insulin. Plays an important role in maintaining normal blood glucose levels and in metabolic adaptation to nutrient availability. Via its regulation of pyruvate dehydrogenase activity, plays an important role in maintaining normal blood pH and in preventing the accumulation of ketone bodies under starvation. Plays a role in the regulation of cell proliferation and in resistance to apoptosis under oxidative stress. Plays a role in p53/TP53-mediated apoptosis. [UniProtKB/Swiss-Prot Function]</p>