

Product datasheet for **RC207264**

Glycerol kinase (GK) (NM_203391) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glycerol kinase (GK) (NM_203391) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Glycerol kinase
Synonyms:	GK1; GKD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC207264 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCAGCCTCAAAGAAGGCAGTTTTGGGGCCATTGGTGGGGCGGTGGACCAGGCACCCAGTTCGACGC
 GCTTTTTGGTTTTCAATTCAAAAACAGCTGAACTACTTAGTCATCATCAAGTAGAAAAACAAAGAGTT
 CCCAAGAGAAGGATGGGTGGAACAGGACCTAAGGAAATCTACATTCTGTCTATGAGTGTATAGAGAAA
 ACATGTGAGAAACTTGGACAGCTCAAAATTGATATTTCCAACATAAAAGCTATTGGTGTGAGCAACCAGA
 GGGAAACCACTGTAGTCTGGGACAAGATAACTGGAGAGCCTCTACAATGCTGTGGTGTGGCTTGTATCT
 AAGAACCAGTCTACCGTTGAGAGTCTTAGTAAAAGAATTACAGGAAATAATAACTTTGTCAAGTCCAAG
 ACAGGCCCTCCACTTAGCACTTACTTCAGTGCAGTGAACCTTCGTTGGCTCCTTGACAATGTGAGAAAAG
 TTCAAAGGCAGTTGAAGAAAAACGAGCTCTTTTTGGGACTATTGATTCATGGCTATTTGGAGTTTGAC
 AGGAGGAGTCAATGGAGGTGCCACTGTACAGATGTAACAAATGCAAGTAGGACTATGCTTTTCAACATT
 CATTCTTTGGAATGGGATAAACAACCTCTGCGAATTTTTTGGAAATCCAATGGAAATCTTCCAAATGTCC
 GGAGTTCTTCTGAGATCTATGGCCTAATGAAAATCTCTCATAGCGTGAAAGCTGGGGCCTTGAAGGTGT
 GCCAATATCTGGGTGTTTAGGGGACCACTCTGCTGCATTGGTGGGACAAATGTGCTTCCAGATTGGACAA
 GCCAAAAATACGTATGGAACAGGATGTTTCTTACTATGTAATACAGGCCATAAGTGTGTATTTTCTGATC
 ATGGCCTTCTCACCACAGTGGCTTACAACTTGGCAGAGACAAACCAGTATATTATGCTTTGGAAGGTTC
 TGTAGCTATAGCTGGTGTGTTATTTCGCTGGCTAAGAGACAATCTTGAATTATAAGACCTCAGAAGAA
 ATTGAAAACTTGCTAAGAAGTAGTACTTCTTATGGCTGCTACTTCGTCAGCATTTCGGGGTTAT
 ATGCACCTTATTGGGAGCCAGCGCAAGAGGGATAATCTGTGGACTCACTCAGTTCACCAATAAATGCCA
 TATTGCTTTTGCTGCATTAGAAGCTGTTTGTTCCAAACCTCGAGAGATTTTGGATGCCATGAATCGAGAC
 TGTGGAATCCACTCAGTCATTTGCAGGTAGATGGAGGAATGACCAGCAAAAAATCTTATGCAGCTAC
 AAGCAGACATTCTGTATATACCAGTAGTGAAGCCCTCAATGCCCGAAACCACTGCACTGGGTGCGGCTAT
 GGCGGCAGGGGCTGCAGAAGGAGTCGGCGTATGGAGTCTCGAACCCGAGGATTTGTCTGCCGTCACGATG
 GAGCGTTTGAACCTCAGATTAATGCGGAGGAAAGTGAATTCGTTATTCTACATGGAAGAAAGCTGTGA
 TGAAGTCAATGGGTTGGTTACAACCTCAATCTCCAGAAAGTGGTATTCCA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC207264 protein sequence
 Red=Cloning site Green=Tags(s)

MAASKKAVLGPLVGAVDQGTSSSTRFLVFNASKTAELL SHHQVEIKQEFREGWVEQDPKEILHSVYECIEK
 TCEKLGQLKIDISNIKAIIGVSNQRETTVVWDKITGEPLYNVAVVWDLRTQSTVESLSKRITGNNNFVKS
 TGLPLSTYFSAVKLRWLLDNVRKVQKAVEEKRALFGTIDSWLIWLSLGGVNGGVHCTDVTNASRMTLFI
 HSLEWDKQLCEFFGIPMEILPNVRSSEIYGLMKISHSVKAGALEGVPIISGLGDQSAALVGQMCQFQIGQ
 AKNTYGTGCFLLCNTGHKCVFSDHGLLTTVAYKLRDVKPVVYALEGSVAIAGAVIRWLRDNLGIIKTSEE
 IEKLAKEVGTSYGCVFVPAFSGLYAPYWEPSARGIICGLTQFTNKCHIAFAALEAVCFQTREILDAMNRD
 CGIPLSHLQVDGGMTSNKILMQLQADILYIPVVKPSMPETTALGAAMAAGAAEGVGVWSLEPEDLSAVTM
 ERFEPQINAESEIRYSTWKKAVMKSMGWVTTQSPESGIP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6341_f06.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_203391

ORF Size: 1590 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_203391.3](#), [NP_976325.1](#)

RefSeq Size: 4503 bp

RefSeq ORF: 1593 bp

Locus ID: 2710

UniProt ID: [P32189](#)

Cytogenetics: Xp21.2

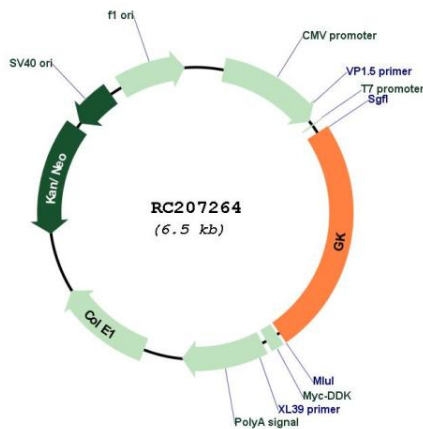
Protein Families: Druggable Genome

Protein Pathways: Glycerolipid metabolism, Metabolic pathways, PPAR signaling pathway

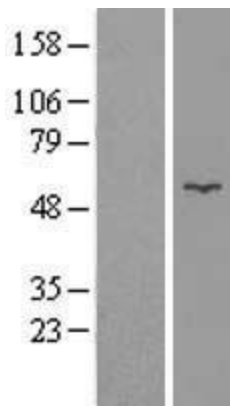
MW: 58.2 kDa

Gene Summary: The protein encoded by this gene belongs to the FGGY kinase family. This protein is a key enzyme in the regulation of glycerol uptake and metabolism. It catalyzes the phosphorylation of glycerol by ATP, yielding ADP and glycerol-3-phosphate. Mutations in this gene are associated with glycerol kinase deficiency (GKD). Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2011]

Product images:



Circular map for RC207264



Western blot validation of overexpression lysate (Cat# [LY404332]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207264 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GK protein (Cat# [TP307264]). The protein was produced from HEK293T cells transfected with GK cDNA clone (Cat# RC207264) using MegaTran 2.0 (Cat# [TT210002]).