

Product datasheet for **RC213688**

Glycerol kinase (GK) (NM_000167) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glycerol kinase (GK) (NM_000167) 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:

>RC213688 representing NM_000167
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCAGCCTCAAAGAAGGCAGTTTTGGGGCCATTGGTGGGGCGGTGGACCAGGCACCCAGTTCGACGC
 GCTTTTTGGTTTTCAATTCAAAAACAGCTGAACTACTTAGTCATCATCAAGTAGAAAATAAAACAAGAGTT
 CCCAAGAGAAGGATGGGTGGAACAGGACCTAAGGAAATCTACATTCTGTCTATGAGTGTATAGAGAAA
 ACATGTGAGAAAATTGGACAGCTCAATATTGATATTTCCAACATAAAAGCTATTGGTGTGAGCAACCAGA
 GGGAAACCACTGTAGTCTGGGACAAGATAACTGGAGAGCCTCTACAATGCTGTGGTGTGGCTTGTATCT
 AAGAACCAGTCTACCGTTGAGAGTCTTAGTAAAAGAATCCAGGAAATAATAACTTTGTCAAGTCCAAG
 ACAGGCCCTCCACTTAGCACTTACTTCAGTGCAGTGAACCTCGTTGGCTCCTTGACAATGTGAGAAAAG
 TTCAAAGGCCGTTGAAGAAAAACGAGCTCTTTTTGGGACTATTGATTCATGGCTTATTTGGAGTTTGAC
 AGGAGGAGTCAATGGAGGTGCCACTGTACAGATGTAACAAATGCAAGTAGGACTATGCTTTTCAACATT
 CATTCTTTGGAATGGGATAAACAACCTCTGCGAATTTTTTGGAAATCCAATGGAAATCTTCCAAATGTCC
 GGAGTTCTTCTGAGATCTATGGCCTAATGAAAGCTGGGGCCTTGAAGGTGTGCCAATATCTGGGTGTT
 AGGGGACCACTGCTGCATTGGTGGGACAAATGTGCTTCCAGATTGGACAAGCCAAAAATACGTATGGA
 ACAGGATGTTTCTACTATGTAATACAGGCCATAAGTGTGATTTTTCTGATCATGGCCTTCTCACCACAG
 TGGCTTACAACTTGGCAGAGACAAACCAGTATATTATGCTTTGGAAGTTCTGTAGCTATAGCTGGTGC
 TGTTATTCGCTGGCTAAGAGACAATCTTGAATTATAAAGACCTCAGAAGAAATGAAAACTTGCTAAA
 GAAGTAGGTACTTCTTATGGCTGCTACTCGTCCCAGCATTTCGGGGTTATATGCACCTTATTGGGAGC
 CCAGCGCAAGAGGATAATCTGTGGACTCACTCAGTTCACCAATAAATGCCATATTGCTTTTGTGCTGAT
 AGAAGCTGTTTGTTCCAAACCTCGAGAGATTTTGGATGCCATGAATCGAGACTGTGGAATCCACTCAGT
 CATTTCAGGTAGATGGAGGAATGACCAGCAACAAAATCTTATGCAGCTACAAGCAGACATTCTGTATA
 TACCAGTAGTGAAGCCCTCAATGCCGAAACCACTGCACTGGGTGCGGCTATGGCGGCAGGGGCTGCAGA
 AGGAGTCGGCGTATGGAGTCTCGAACCAGGATTTGTCTGCCGTACGATGGAGCGGTTTGAACCTCAG
 ATTAATGCGGAGGAAAGTGAATTCGTTATTCTACATGGAAGAAAGCTGTGATGAAGTCAATGGGTTGG
 TTACAACCTCAATCTCCAGAAAGTGGTATTCCA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC213688 representing NM_000167
 Red=Cloning site Green=Tags(s)

MAASKKAVLGPLVGAVDQGTSSSTRFLVFNSKTAELL SHHQVEIKQEFPREGWVEQDPKEILHSVYECIEK
 TCEKLGQLNIDISNIKAIGVSNQRETTVVWDKITGEPLYNVAVVWDLRTQSTVESLSKRIPGNNNFVKSK
 TGLPLSTYFSAVKLRWLLDNVRKVQKAVEEKRALFGTIDSWLIWLSLGGVNGGVHCTDVTNASRTMLFNI
 HSLEWDKQLCEFFGIPMEILPNVRSSEIYGLMKAGALEGVPI SGCLGDQSAALVQMCQFQIGQAKNTYG
 TGCFLCNTGHKCVFSDHGLLTTVAYKLRDKPVVYALEGSVAIAGAVIRWLRDNLGIKTSSEEIEKLAK
 EVGTSYGCYFVPAFSGLYAPYWEPSARGIICGLTQFTNKCHIAFAALEAVCFQTRIELDAMNRDCGIPLS
 HLQVDGGMTSNKILMQLQADILYIPVVKPSPMETTALGAAMAAGAAEAGVGVWSLEPEDLSAVTMERFEPQ
 INAESEIRYSTWKKAVMKSMGWVTTQSPESGIP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6495_f12.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_000167

ORF Size: 1572 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_000167.6](#)

RefSeq Size: 3573 bp

RefSeq ORF: 1575 bp

Locus ID: 2710

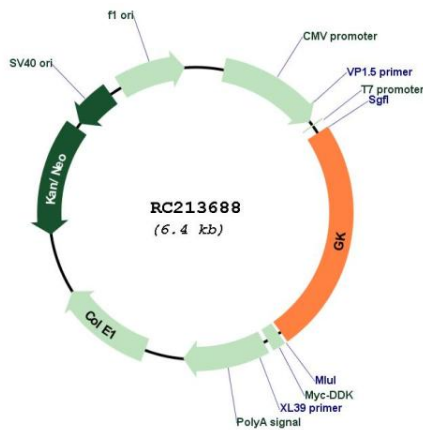
UniProt ID: [P32189](#)

Cytogenetics: Xp21.2

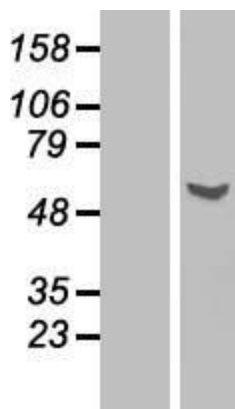
Domains: FGGY
Protein Families: Druggable Genome
Protein Pathways: Glycerolipid metabolism, Metabolic pathways, PPAR signaling pathway
MW: 57.3 kDa

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]

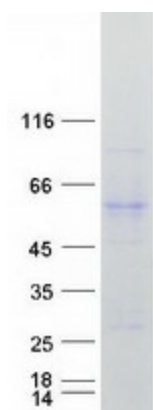
Product images:



Circular map for RC213688



Western blot validation of overexpression lysate (Cat# [LY424888]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213688 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GK protein (Cat# [TP313688]). The protein was produced from HEK293T cells transfected with GK cDNA clone (Cat# RC213688) using MegaTran 2.0 (Cat# [TT210002]).