

## Product datasheet for **MR230048**

### **Gck (NM\_001287386) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Gck (NM_001287386) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Gck
Synonyms:	Gk; GLK; Gls006; HK4; HKIV; Hlb62; HXKP; MODY2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>MR230048 representing NM\_001287386  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCTGTGGATACTACAAGGAGGGGAGCCAGTCGTTGACTCTGGTAGAGCAGATCCTGGCAGAGTTCC  
 AGCTGCAGGAGGAAGACCTGAAGAAGGTGATGAGCCGGATGCAGAAGGAGATGGACCGTGGCCTGAAGCT  
 GGAGACCCATCAGGAGGCCAGTGTAAAGATGTTGCCACCTACGTGCGTTCACCCAGAAAGGCTCAGAA  
 GTTGGAGACTTTCTCCTTAGACCTGGGAGGAACCAACTCAGGGTGTGCTGGTAAAAGTGGGGGAGG  
 GGGAGGCAGGACAGTGGAGCGTGAAGACGAAACACCAGATGTATTCCATCCCGAGGACGCCATGACGGG  
 CACTGCGGAGATGCTCTTTGACTACATCTCTGAGTGCATCTCTGACTTCTGGACAAGCATCAGATGAAA  
 CACAAGAACTACCCCTGGGCTCACCTTCTCCTCCCTGTAAGGCACGAAGACATAGACAAGGGCATCC  
 TGCTCAACTGGACCAAGGGCTTCAAGGCCTCCGGAGCAGAAGGGAACAACATCGTGGGACTTCTCCGAGA  
 TGCTATCAAGAGGAGAGGGGACTTTGAGATGGATGTGGTGGCAATGGTGAATGACACGGTGGCCACAATG  
 ATCTCCTGCTACTATGAAGACCCCAATGTGAGGTCGGCATGATTGTGGGCACCGGCTGCAACGCCTGCT  
 ACATGGAGGAGATGCAGAATGTGGAGCTGGTGGAAAGGCGATGAGGGGCGCATGTGTGTCAACACAGAGTG  
 GGGCGCCTTCGGGAACCTCCGGTGAAGTGGACGAGTTTCTCCTGGAGTACGACCGGATGGTGGATGAGAGC  
 TCAGTGAACCCCGGTGAGCAGCTGTACGAAAAGATCATTGGCGGAAAGTACATGGGCGAGCTGGTACGAC  
 TTGTGCTGCTCAAGCTGGTAGAGGAGAATCTTCTGTTCCACGGAGAGGCCTCAGAGCAGCTGCGCACACG  
 TGGTGTCTTTGAGACCCGTTTGTGTGCGAGGTGGAGAGCGACTCTGGGGACCGAAGGCAGATCCTTAAC  
 ATCCTGAGCACTCTGGGCCTTCGACCCTCTGTGCGGACTGCGACATTGTGCGCCGTGCCTGTGAAAGCG  
 TGTCACCTCGCGCCGCCACATGTGCTCAGCAGGACTAGCGGGGGTCAAAATCGCATGCGCGAAAGCCG  
 CAGTGAGGACGTGATGCGCATCACGGTGGGCGTGGATGGCTCCGTGTACAAGCTGCACCCGAGCTTCAAG  
 GAGCGGTTTACGCCAGTGTGCGCAGGCTGACACCCAAGTGCAGAAATCACCTTATTGAATCAGAGGAGG  
 GCAGCGCAGGGGAGCCGACTGGTCTCTGCGGTGGCCTGCAAGAAGGCTTGCATGCTGGGCCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR230048 representing NM\_001287386  
 Red=Cloning site Green=Tags(s)

MAVDTRRGAQSLTLVEQILAEFQLQEEDLKKVMSRMQKEMDRGLKLETHQEASVKMLPTYVVRSTPEGSE  
 VGDFLSLDLGGTNFRVMLVKVGEAGEQWSVKTKHQMYSIPEDAMTGAEMLFDYISECISDFLDKHQMK  
 HKKLPLGFTFSFPVRHEDIDKGILLNWTGFKASGAEGNNIVGLLRDAIKRRGDFEMDVVAMVNDTVATM  
 ISCYIEDRQCEVGMIVGTGCNACYMEEMQNVELVEGDEGRMCVNTEWGAFGNSGELDEFLLLEYDRMVDES  
 SVNPGQQLYEKIIGGKYMVELVRLVLLKLVEENLLFHGEASEQLRTRGAFETRFSQVESDSDGDRRQILN  
 ILSTLGLRPSVADCDIVRRACESVSTRAAHMCSAGLAGVINRMRESRSEDVMRITVGVDSVYKLPSPFK  
 ERFHASVRRRLTPNCEITFIESEEGSGRGAALVSAVACKKACMLGQ

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

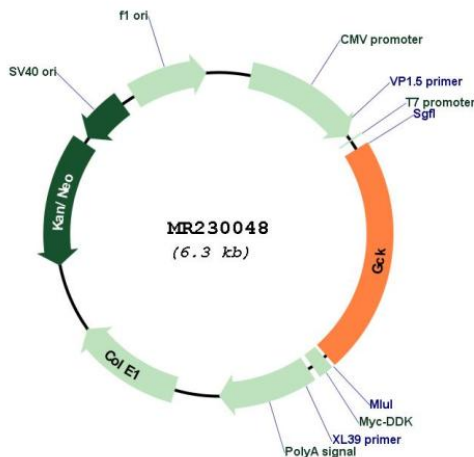
**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_001287386

ORF Size: 1395 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\\_001287386.1](#), [NP\\_001274315.1](#)

**RefSeq Size:** 2372 bp

**RefSeq ORF:** 1398 bp

**Locus ID:** 103988

**UniProt ID:** [P52792](#)

**Cytogenetics:** 11 3.88 cM

**MW:** 52.3 kDa

**Gene Summary:** Catalyzes the initial step in utilization of glucose by the beta-cell and liver at physiological glucose concentration. Pancreatic glucokinase plays an important role in modulating insulin secretion. Hepatic glucokinase helps to facilitate the uptake and conversion of glucose by acting as an insulin-sensitive determinant of hepatic glucose usage.[UniProtKB/Swiss-Prot Function]