

## Product datasheet for **MG207435**

### **Gck (BC011139) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Gck (BC011139) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Gck
Synonyms:	GLK, Gk, HK4, HKIV, HXKP, MODY2, NIDDM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG207435 representing BC011139  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCTGTGGATACTACAAGGAGGGGAGCCAGTCGTTGACTCTGGTAGAGCAGATCCTGGCAGAGTTCC  
 AGCTGCAGGAGGAAGACCTGAAGAAGGTGATGAGCCGGATGCAGAAGGAGATGGACCGTGGCCTGAAGCT  
 GGAGACCCATCAGGAGGCCAGTGTAAAGATGTTGCCACCTACGTGCGTTCACCCAGAAAGGCTCAGAA  
 GTTGGAGACTTTCTCCTTAGACCTGGGAGGAACCAACTTCAGGGTGTGCTGGTAAAAGTGGGGGAGG  
 GGGAGGCAGGACAGTGGAGCGTGAAGACGAAACACCAGATGTATTCCATCCCCGAGGACGCCATGACGGG  
 CACTGCGGAGATGCTCTTTGACTACATCTCTGAGTGCATCTCTGACTTCTGGACAAGCATCAGATGAAA  
 CACAAGAACTACCCCTGGGCTCACCTTCTCCTTCCCTGTAAGGCACGAAGACATAGACAAGGGCATCC  
 TGCTCAACTGGACCAAGGGCTTCAAGGCCTCCGGAGCAGAAGGGAACAACATCGTGGGACTTCTCCGAGA  
 TGCTATCAAGAGGAGAGGGGACTTTGAGATGGATGTGGTGGCAATGGTGAATGACACGGTGGCCACAATG  
 ATCTCCTGCTACTATGAAGACCCCAATGTGAGGTCGGCATGATTGTGGGCACCGGCTGCAACGCCTGCT  
 ACATGGAGGAGATGCAGAATGTGGAGCTGGTGGAAAGGCGATGAGGGGCGCATGTGTGTCAACACAGAGTG  
 GGGCGCCTTCGGAACTCCGGTGAAGTGGACGAGTTTCTGCTGGAGTACGACCGGATGGTGGATGAGAGC  
 TCAGTGAACCCCGGTGAGCAGCTGTACGAAAAGATCATTGGCGGAAAGTACATGGGCGAGCTGGTACGAC  
 TTGTGCTGCTCAAGCTGGTAGAGGAGAATCTTCTGTTCCACGGAGAGGCCCTCAGAGCAGCTGCGCACACG  
 TGGTGTCTTTGAGACCCGTTTGTGTGCGAGGTGGAGAGCGACTCTGGGGACCGAAGGCAGATCCTTAAC  
 ATCCTGAGCACTCTGGGCCTTCGACCCTCTGTGCGGACTGCGACATTGTGCGCCGTGCCTGTGAAAGCCG  
 TGTCACACTCGCGCCGCCACATGTGCTCAGCAGGACTAGCGGGGGTCATAAATCGCATGCGCGAAAGCCG  
 CAGTGAGGACGTGATGCGCATCACGGTGGGCGTGGATGGCTCCGTGTACAAGCTGCACCCGAGCTTCAAG  
 GAGCGGTTTTACGCCAGTGTGCGCAGGCTGACACCCAAGTGCAGAAATCACCTTATTGAATCAGAGGAGG  
 GCAGCGCAGGGGAGCCGCACTGGTCTCTGCGGTGGCCTGCAAGAAGGCTTGCATGCTGGGCCAG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>MG207435 representing BC011139  
 Red=Cloning site Green=Tags(s)

MAVDTRRGAQSLTLVEQILAEFQLQEEDLKKVMSRMQKEMDRGLKLETHQEASVKMLPTYVVRSTPEGSE  
 VGDFLSLDLGGTNFRVMLVKVGEAGEQWSVKTKHQMYSIPEDAMTGAEMLFDYISECISDFLDKHQMK  
 HKKLPLGFTTFSPVVRHEDIDKGILLNWTGFKASGAEGNNIVGLLRDAIKRRGDFEMDVVAMVNDTVATM  
 ISCYEDRQCEVGMIVGTGCNACymeEQNVELVEGDEGRMCVNTWEGAFGNSGELDEFLLLEYDRMVDES  
 SVNPGQQLYEKIIGGKYMGEVRLVLLKLVENLLFHGEASEQLRTRGAFETRFVVSQVESDSGDRRQILN  
 ILSTLGLRPSVADCDIVRRACESVSTRAAHMCSAGLAGVINRMRESRSEDVMRITVGVGDSVYKLPSPFK  
 ERFHASVRRLLTPNCEITFIESEEGSGRGAALVSAVACKKACMLGQ

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

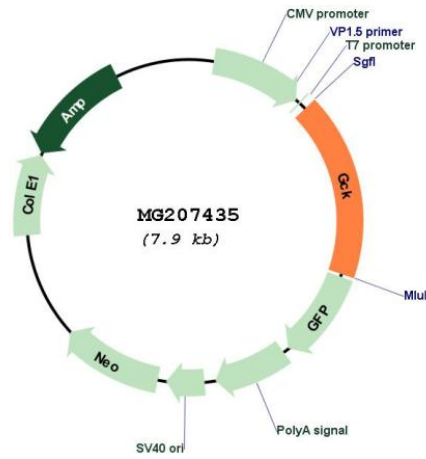
SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: BC011139

ORF Size: 1397 bp

<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">BC011139</a> , <a href="#">AAH11139</a>
<b>RefSeq Size:</b>	1798 bp
<b>RefSeq ORF:</b>	1397 bp
<b>Locus ID:</b>	103988
<b>Cytogenetics:</b>	11 3.88 cM
<b>Gene Summary:</b>	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]