

## Product datasheet for **SC120090**

### GLDC (NM\_000170) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	GLDC (NM_000170) Human Untagged Clone
Tag:	Tag Free
Symbol:	GLDC
Synonyms:	GCE; GCSP; HYGN1
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)

**Fully Sequenced ORF:** >OriGene ORF sequence for NM\_000170 edited  
GGCACGAGGGCAGCGCCATTTCATTCGCCGCGAGCGTCCATCCATCTGTCCGGCCGACTG  
TCCAGCGAAAGGGGCTCCAGGCCGGGCGCAGCCGCCACCCGGGGGACCGAGGCCAGGAGA  
GGGGCCAAAGAGCGCGGCTGACCCTTGCGGGCCGGGGCAGGGGACGGTGGCCGCGGCCATG  
CAGTCCTGTGCCAGGGCGTGGGGCTGCGCCTGGGCCGCGGGGTGCGGGGCGGCCCGC  
CTGGCTGGGGGATCGGGGCCGTGCTGGCGCCGCGGAGCCGGGACAGCAGCAGTGGCGGC  
GGGACAGCGCCGCGGCTGGGGCCTCGCGCCTCCTGGAGCGCCTTCTGCCAGACACGAC  
GACTTCGCTCGGAGGCACATCGGCCCTGGGACAAAGACCAGAGAGAGATGCTGCAGACC  
TTGGGGCTGGCGAGCATTGATGAATTGATCGAGAAGACGGTCCCTGCCAACATCCGTTTG  
AAAAGACCCTTAAAATGGAAGACCCTGTTTGTAAAATGAAATCCTTGCAACTCTGCAT  
GCCATTTCAAGCAAAAACAGATCTGGAGATCGTATATTGGCATGGGCTATTATAACTGC  
TCAGTGCCACAGACGATTTTGCAGAACTTACTGGAGAACTCAGGATGGATCACCCAGTAT  
ACTCCATACCAGCCTGAGGTGTCTCAGGGGAGGCTGGAGAGTTTACTCAACTACCAGACC  
ATGGTGTGTGACATCACAGGCCTGGACATGGCCAATGCATCCCTGCTGGATGAGGGGACT  
GCAGCCGAGAGGCACTGCAGCTGTGCTACAGACACAACAAGAGGAGGAAATTTCTCGTT  
GATCCCGTTGCCACCCACAGACAATAGCTGTTGTCCAGACTCGAGCCAAATATACTGGA  
GTCCTCACTGAGCTGAAGTTACCCTGTGAAATGGACTTCAGTGGAAAAGATGTCAGTGA  
AGAGCTCATCAGAGTGGGAGCCTGGCCTGCTGTGCTACTGACCTTTTGTGTTGTCATC  
TTGAGGCCACCTGGAGAATTTGGGGTAGACATCGCCCTGGGACAGTCCCAGAGATTTGGA  
GTGCCACTGGGCTATGGGGGACCCCATGCAGCATTTTTTGTGTCGAGAAAGCTTGGTG  
AGAATGATGCCTGGAAGAATGGTGGGGTAACAAGAGATGCCACTGGGAAAGAAGTGAT  
CGTCTTGCTCTTCAAACCAGGGAGCAACACATTCGGAGAGACAAGGCTACCAGCAACATC  
TGTACAGCTCAGGCCCTTTGGCGAATATGGCTGCCATGTTTGAATCTACCATGGTTCC  
CATGGGCTGGAGCATATTGCTAGGAGGTTACATAATGCCACTTTGATTTTGCAGAAGGT  
CTCAAGCGAGCAGGGCATCAACTCCAGCATGACCTGTTCTTTGATACCTTGAAGATTCAG  
TGTGGCTGCTCAGTGAAGGAGTCTTGGCAGGGCCGCTCAGCGGCAGATCAATTTTCGG



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CTTTTTGAGGATGGCACACTTGGTATTTCTCTTGATGAAACAGTCAATGAAAAAGATCTG  
GACGATTTGTTGTGGATCTTTGGTTGTGAGTCATCTGCAGAACTGGTTGCTGAAAGCATG  
GGAGAGGAGTGCAGAGGTATTCCAGGTCTGTGTTCAAGAGGACCAGCCCGTTCCCTACC  
CATCAAGTGTTCACAGCTACCACTCTGAAACAAACATTTCCGGTACATGAAGAACTG  
GAAAAAAGACATTTCCCTTGTTCACAGCATGATTCCACTGGGATCCTGCACCATGAAA  
CTGAACAGTTCGTCTGAACTCGCACCTATCACATGGAAAGAATTTGCAAACATCCACCCC  
TTTGTGCCTCTGGATCAAGCTCAAGGATATCAGCAGCTTTCCGAGAGCTTGAGAAGGAT  
TTGTGTGAACTCACAGGTTATGACCAGGTCTGTTCCAGCCAAACAGCGAGCCAGGGA  
GAATATGCTGGACTGGCCACTATCCGAGCCTACTTAAACCAGAAAAGGAGAGGGGCACAGA  
ACGGTTTGCCTCATTCCGAAATCAGCACATGGGACCAACCCAGCAAGTGCCACATGGCA  
GGCATGAAGATTCAGCCTGTGGAGTGGATAAATATGGGAATATCGATGCAGTTCACCTC  
AAGCCATGGTGGATAAGCACAAGGAGAACCTAGCAGCTATCATGATTACATACCCATCC  
ACCAATGGGGTGTGAGAGAACATCAGTGACGTGTGACCTCATCCATCAACATGGA  
GGACAGGTCTACCTAGACGGGGCAAATATGAATGCTCAGGTGGGAATCTGTCGCCCTGGA  
GACTTCGGGTCTGATGTCTCGCACCTAAATCTTACAAGACCTTCTGCATTCCCCACGGA  
GGAGGTGGTCTGGCATGGGGCCATCGGAGTGAAGAAACATCTCGCCCCGTTTTTGCC  
AATCATCCCGTCAATTTACTAAAGCGGAATGAGGATGCCTGTCCCTGTGGAACCGTCAGT  
GCGGCCCATGGGGCTCCAGTTCATCTTGCCATTTCCCTGGGCTTATATCAAGATGATG  
GGAGGCAAGGGTCTTAAACAAGCCACGGAAACTGCGATATTAATGCCAACTACATGGCC  
AAGCGATTAGAAACACACTACAGAATCTTTTCAGGGGTGCAAGAGGTTATGTGGTGCAT  
GAATTTATTTGGACACGAGACCCTTCAAAAAGCTGCAAATATTGAGGCTGTGGATGTG  
GCCAAGAGACTCCAGGATTATGGATTTACGCCCCTACCATGTCTGGCCTGTGGCAGGG  
ACCCTCATGGTGGAGCCCACTGAGTCGGAGGACAAGGCAGAGCTGGACAGATTCTGTGAT  
GCCATGATCAGCATTGCGCAGGAAATTGCTGACATTGAGGAGGGCCGCATCGACCCAGG  
GTCAATCCGCTGAAGATGTCTCCACACTCCCTGACCTGCGTTACATCTTCCCACTGGGAC  
CGGCTTATTCCAGAGAGGTGGCAGCATTCCCACTCCCCTTCGTGAAACCAGAGAACAAA  
TTCTGGCCAACGATTGCCCGGATTGATGACATATATGGAGATCAGCACCTGGTTGTACC  
TGCCACCCATGGAAAGTTTATGAGTCTCCATTTCTGAACAAAAGAGGGCGTCTTCTTAG  
TCCTCTCCCTAAGTTTAAAGGACTGATTTGATGCCTCTCCCCAGAGCATTGATAAGC  
AAGAAAGATTTCTCCACCCAGCCTCAAGTAGGAGTTTTATATACTGTGTATATCT  
CTGTAATCTGTCAAGTAAATGTAATACAGTAGCTGGAGGGAGTCGAAGCTGATGGT  
TGGAAGACGGATTTGCTTTGGTATTCTGCTCCACATGTGCCAGTTGCCTGGATTGGGAG  
CCATTTGTGTTTTGCGTAGAAAGTTTTAGGAACTTTAACTTTTAAATGTGGCAAGTTTGC  
AGATGTCAAGAGGCTATCCTGGAGACTTAATAGACATTTTTTTGTTCCAAAAGAGTCCA  
TGTGGACTGTGCCATCTGTGGGAAATCCCAGGGCAAATGTTTACATTTTGTATACCCTGA  
AGAACTTTTTCTCTAATATGCCTAATCTGTAATCACATTTCTGAGTGTTCCTCTT  
TTTCTGTGTGAGGTTTTTTTTTAAATCTGCATTTATTAGTATTCTAATAAAAGCTTTT  
GATCGGAAAAAAAAAAAAAAAAAAC

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_000170 unedited  
 GGTACAATTGTATACGACTCACTATAGGCGGCCGCGATTTCGGCAGGAGGGCAGCGCCCA  
 TTCATTGCCCCGCGAGCGTCCATCCATCTGTCCGGCCGACTGTCCAGCGAAAGGGGCTCCA  
 GGCCGGGCGCAGCCGCCACCCGGGGGACCGAGGCCAGGAGAGGGGCAAGAGCGCGGCTG  
 ACCCTTGGCGGCCGGGGCAGGGGACGGTGGCCCGGCCATGCAGTCTGTGCCAGGGCGT  
 GGGGCTGCGCCTGGGCCGCGGGTTCGGGGCGGCCGCCGCTGGCTGGGGGATCGGGG  
 CGTGTGGGCGCCGCGGAGCCGGGACAGCAGCAGTGGCGCGGGGACAGCGCCCGGCT  
 GGGGGCTCGCGCTCCTGGAGCGCTTCTGCCAGACAGCAGACTTCGCTCGGAGGCA  
 CATCGGCCCTGGGGACAAAGACCAGAGAGAGATGCTGCAGACCTTGGGGTGGCGAGCAT  
 TGATGAATTGATCGAGAAGACGGTCCCTGCCAACATCCGTTTGAAAAGACCCCTTGAAAAT  
 GGAAGACCCTGTTGTGAAAATGAAATCCTTGCAACTCTGCATGCCATTCAAGCAAAAA  
 CCAGATCTGGAGATCGTATATTGGCATGGGCTATTAATCGGGGTTCAATGCCACAGACG  
 ATTTTGCGAACCTACTGGAGAACTCANGATGGATCACCCAGTATACTCCATTACCAGCC  
 TGAGTGTCTCAGNGAGGCTGNGAGAGTACTCAACTACCAGACCATGGGTGTGTGACAT  
 CACAGGCTGGACATGGCCAATGCATCCCTGCTGGATGAAGGGGACTGCAGCCGCANAAG  
 CACTGCAGCTGTCTACAGACACAACAAGAGGGAGGAAATTTCTGTTGATCCCCGTTGC  
 CACCACAGACAATACCTGTTGTTTCAGACTCGAGCCAAATTC

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_000170 unedited  
 TATGGACCGCGGCACGCAATCTAGTATCGAGTTTTTTTTTTTTTTTTTTTTCCGATCAAAAG  
 CTTTTATTAGAATACTAATAAATGCAGATTAATAAAAAAAAAAACCTCACACAGAAAAAGAG  
 GAAAACACTCAGAAATGTGATTACAGATTAGGCATATTAGAGGAAAAAGAGTTTCTCAGG  
 GTATACAAAATGTAAACATTTGCCCTGGGATTTCCACAGATGGCACAGTCCACATGGAC  
 TCTTTTGAACAAAAAATGTCTATTAAGTCTCCAGGATAGCCTCTATGACATCTGCAA  
 CTTGCCACATTAAGTTAAAGTTCCTAAAACCTTCTACGCAAAACAAAAATGGCTCCC  
 AATCCAGGCAACTGGCACATGTGGAAGCAGAATACCAAAGCAAATCCGTCTTCCAACCAT  
 CNAGCTTCGACTTCCTTCCACCTACTGGAATTTAACCTTTTAACCTTGGGGCGGGGTT  
 TTTCCCGGGTATTTTCCCGGGTTTTTAAACCCCTTTTGGGGGGGGGGGGGGGGGGGG  
 AAAAAAATTTTTTGGTCTTAAAGCGCCCGGGGGGAGGGGGCAAAAAACCCCTCT  
 TTTAACCTGTTTGGGGGGAGGGAGGGCCCTTAAAAAACCCCTTTTTTTTTTTTTT  
 TAAAAAAGGGGGGGGCTCTTCTTCCCTCCCTCCCGGGGGGGGGGGGGGGGGGGGA  
 AAAAAAAGGGGGGGGGCCCTTTTTATTTTTTAAACTTCGGCGGGCCTGTGGG  
 GGGCAAAAAAATTTTTTTTTTTTTTTTTTTCTTGGGGGGGGGGGGGGGGGGGGGGGGGGGG  
 CCCCTCTTATAAATAAACCCCTTTTAAAAA

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_000170

**Insert Size:**

3700 bp

<b>OTI Disclaimer:</b>	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.
	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>
<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="#">NM_000170.1</a> , <a href="#">NP_000161.1</a>
<b>RefSeq Size:</b>	3783 bp
<b>RefSeq ORF:</b>	3063 bp
<b>Locus ID:</b>	2731
<b>UniProt ID:</b>	<a href="#">P23378</a>
<b>Cytogenetics:</b>	9p24.1
<b>Domains:</b>	GDC-P
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Glycine, serine and threonine metabolism, Metabolic pathways
<b>Gene Summary:</b>	Degradation of glycine is brought about by the glycine cleavage system, which is composed of four mitochondrial protein components: P protein (a pyridoxal phosphate-dependent glycine decarboxylase), H protein (a lipoic acid-containing protein), T protein (a tetrahydrofolate-requiring enzyme), and L protein (a lipoamide dehydrogenase). The protein encoded by this gene is the P protein, which binds to glycine and enables the methylamine group from glycine to be transferred to the T protein. Defects in this gene are a cause of nonketotic hyperglycinemia (NKH).[provided by RefSeq, Jan 2010]