

## Product datasheet for **SC324246**

### GLUD1 (NM\_005271) Human Untagged Clone

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids                    |
| Product Name:             | GLUD1 (NM_005271) Human Untagged Clone |
| Tag:                      | Tag Free                               |
| Symbol:                   | GLUD1                                  |
| Synonyms:                 | GDH; GDH1; GLUD                        |
| Mammalian Cell Selection: | Neomycin                               |
| Vector:                   | pCMV6-AC (PS100020)                    |
| E. coli Selection:        | Ampicillin (100 ug/mL)                 |



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_005271, the custom clone sequence may differ by one or more nucleotides

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ATGTACCGCTACCTGGGCGAAGCGCTGTTGCTGTCCCGGGCCGGGCCGCTGCCCTGGGCTCGGCGTCCG
CCGACTCGGCCGCGTTGCTGGGCTGGGCCGGGGACAGCCCGCCGCCCGCCCGCAGCCGGGCTGGCATT
GGCCCGCCGGCGCCACTACAGCGAGGCGGTGGCCGACC GCGAGGACGCCCAACTTCTCAAGATGGTG
GAGGGCTTCTTCGATCGCGGCCAGCATCGTGGAGGACAAGCTGGTGGAGGACCTGAGGACCCGGGAGA
GCGAGGAGCAGAAGCGGAACCGGGTGCGCGGCATCCTGCGGATCATCAAGCCCTGCAACCATGTGCTGAG
TCTCTCCTCCCATCCGGCGCGACGACGGCTCCTGGGAGGTATCGAAGGCTACCGGGCCAGCACAGC
CAGCACCCGACGCCCTGCAAGGGAGGTATCCGTTACAGCACTGATGTGAGTGTAGATGAAGTAAAAGCTT
TGGCTTCTCTGATGACATAACAAGTGTGCAGTGGTTGATGTGCCGTTTGGGGTGCTAAAGCTGGTGTAA
GATCAATCCCAAGAACTATACTGATAATGAATTGAAAAGATCACAAGGAGGTTCCACATGGAGCTAGCA
AAAAGGGCTTTATTGGTCTGGCATTGATGTGCCTGCTCCAGACATGAGCACAGGTGAGCGGGAGATGT
CCTGGATCGTGATACCTATGCCAGCACCATAGGGCACTATGATATTAATGCACACGCTGTGTTACTGG
TAAACCCATCAGCCAAGGGGAATCCATGGACGCATCTCTGCTACTGGCCGTGGTGTCTCCATGGGATT
GAAAATTTTCATCAATGAAGCTTCTTACATGAGCATTTTAGGAATGACACCAGGGTTTGGAGATAAACAT
TTGTTGTTTCAAGGATTTGGTAATGTGGGCCACTACTCTATGAGATATTTACATCGTTTTGGTGCTAAATG
TATTGCTGTTGGTGTGAGTCTGATGGGAGTATATGGAATCCAGATGGTATTGACCCAAAGGAACTGGAAGAC
TTCAAATTGCAACATGGGTCCATTCTGGGCTTCCCAAGGCAAAGCCCTATGAAGGAAGCATCTTGGAGG
CCGACTGTGACATACTGATCCCAGCTGCCAGTGAGAAGCAGTTGACCAAATCCAACGCACCCAGAGTCAA
AGCCAAGATCATTGCTGAAGGTGCAATGGGCCAACAACTCCAGAAGCTGACAAGATCTTCTGGAGAGA
AACATTATGGTTATTCCAGATCTCTACTTGAATGCTGGAGGAGTGACAGTATCTTACTTTGAGTGGCTGA
AGAATCTAAATCATGTACGCTATGGCCGTTTGACCTTCAAATATGAAAGGGATTCTAACTACCCTTGCT
CATGTCTGTTCAAGAGAGTTTAGAAAGAAAATTTGAAAAGCATGGTGGAACTATTCCTTGTACCCACG
GCAGAGTTC AAGACAGGATATCGGGTGCATCTGAGAAAGACATCGTGCCTCTGGCTTGGCATAACAA
TGGAGCGTTCTGCCAGGCAAATTATGCGCACGCCATGAAGTATAACCTGGGATTGGACCTGAGAACAGC
TGCCTATGTTAATGCCATTGAGAAAGTCTTCAAAGTGTACAATGAAGCTGGTGTGACCTTACATAG
    
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**Restriction Sites:** ECoRI-NOT

**ACCN:** NM\_005271

**OTI Disclaimer:** 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 [custsupport@origene.com](mailto:custsupport@origene.com) 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. [More info](#)

**OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

|                               |  |
|-------------------------------|--|
| <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>                | <u><a href="#">NM_005271.1</a></u> , <u><a href="#">NP_005262.1</a></u>  |
| <b>RefSeq Size:</b>           | 3051 bp  |
| <b>RefSeq ORF:</b>            | 1677 bp  |
| <b>Locus ID:</b>              | 2746   |
| <b>UniProt ID:</b>            | <u><a href="#">P00367</a></u>  |
| <b>Cytogenetics:</b>          | 10q23.2  |
| <b>Domains:</b>               | GLFV_dehydrog, GLFV_dehydrog_N   |
| <b>Protein Families:</b>      | Druggable Genome   |
| <b>Protein Pathways:</b>      | Alanine, aspartate and glutamate metabolism, Arginine and proline metabolism, D-Glutamine and D-glutamate metabolism, Metabolic pathways, Nitrogen metabolism  |
| <b>Gene Summary:</b>          | <p>This gene encodes glutamate dehydrogenase, which is a mitochondrial matrix enzyme that catalyzes the oxidative deamination of glutamate to alpha-ketoglutarate and ammonia. This enzyme has an important role in regulating amino acid-induced insulin secretion. It is allosterically activated by ADP and inhibited by GTP and ATP. Activating mutations in this gene are a common cause of congenital hyperinsulinism. Alternative splicing of this gene results in multiple transcript variants. The related glutamate dehydrogenase 2 gene on the human X-chromosome originated from this gene via retrotransposition and encodes a soluble form of glutamate dehydrogenase. Related pseudogenes have been identified on chromosomes 10, 18 and X. [provided by RefSeq, Jan 2016]</p> <p>Transcript Variant: This variant (1) encodes the longest isoform (a).</p> |