

## Product datasheet for **RG204039**

### Glutamine Synthetase (GLUL) (NM\_001033056) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Glutamine Synthetase (GLUL) (NM_001033056) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Glutamine Synthetase
Synonyms:	GLNS; GS; PIG43; PIG59
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG204039 representing NM_001033056 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGACCACCTCAGCAAGTCCCACCTAAATAAAGGCATCAAGCAGGTGTACATGTCCCTGCCTCAGGGTG  
AGAAAGTCCAGGCCATGTATATCTGGATCGATGGTACTGGAGAAGGACTGCGCTGCAAGACCCGGACCCCT  
GGACAGTGAGCCCAAGTGTGGAAGAGTTGCCTGAGTGGAAATTCGATGGCTCCAGTACTTTACAGTCT  
GAGGGTCCAACAGTGACATGTATCTCGTGCCTGCTGCCATGTTTCGGGACCCCTCCGTAAGGACCCTA  
ACAAGCTGGTGTATGTGAAGTTTTCAAGTACAATCGAAGGCCTGCAGAGACCAATTTGAGGCACACCTG  
TAAACGGATAATGGACATGGTGAGCAACCAAGCACCCTGGTTTGGCATGGAGCAGGAGTATACCCTCATG  
GGGACAGATGGGCACCCCTTTGGTTGGCCTTCCAACGGCTTCCCAGGGCCCCAGGGTCCATATTACTGTG  
GTGTGGGAGCAGACAGAGCCTATGGCAGGGACATCGTGGAGGCCATTACCGGGCCTGCTGTATGCTGG  
AGTCAAGATTGCGGGGACTAATGCCGAGGTCATGCCTGCCAGTGGGAATTTAGATTGGACCTTGTGAA  
GGAATCAGCATGGGAGATCATCTCTGGGTGGCCGTTTCATCTTGATCGTGTGTGAAGACTTTGGAG  
TGATAGCAACCTTTGATCCTAAGCCATTCTGGGAACGGAATGGTGCAGGCTGCCATACCAACTTCAG  
CACCAAGGCCATGCGGGAGGAGAATGGTCTGAAGTACATCGAGGAGGCCATTGAGAACTAAGCAAGCGG  
CACCAGTACCACATCCGTGCCTATGATCCCAAGGAGGCCTGGACAATGCCCGACGTCTAACTGGATTCC  
ATGAAACCTCCAACATCAACGACTTTTCTGCTGGTGTAGCCAATCGTAGCGCCAGCATAACGATTCCCCG  
GACTGTTGGCCAGGAGAAGAAGGTTACTTTGAAGATCGTCGCCCTCTGCCAACTGCGACCCCTTTTCG  
GTGACAGAAGCCCTCATCCGCACGTGTCTTCTCAATGAAACCGCGATGAGCCCTCCAGTACAAAAAT

**ACCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG204039 representing NM\_001033056  
 Red=Cloning site Green=Tags(s)

MTTSASSHLNKGIKQVYMSLPQGEKVQAMYIWIDGTGEGLRCKTRTL DSEPKCVEELPEWNFDGSSSTLQS  
 EGSNSDMYL VPAAMFRDPFRKDPNKLVLCEVFKYNNRRPAETNL RHTCKRIMDMVSNQHPWF GMEQEY TLM  
 GTDGHPFGWPSNGFPQGPYYCGVGADRAYGRDIVEAHYRACLYAGVKIAGTNAEVMPAQWEFQIGPCE  
 GISMGDHLWVARFILHRVCEDFGVIATFDPKPIPGNWNAGCHTNFSTKAMREENGLKYIEEAIEKLSKR  
 HQYHIRAYDPKGLDNARRLTGFHETSNINDFSAGVANRSASIRIPRTVGVQEKGYFEDRRPSANCDPFS  
 VTEALIRTCLLNETGDEPFQYKN

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001033056

**ORF Size:** 1119 bp

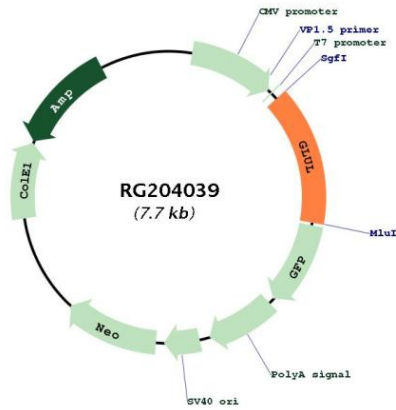
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of 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 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>	<u><a href="#">NM_001033056.1</a></u> , <u><a href="#">NP_001028228.1</a></u>
<b>RefSeq Size:</b>	3205 bp
<b>RefSeq ORF:</b>	1122 bp
<b>Locus ID:</b>	2752
<b>UniProt ID:</b>	<u><a href="#">P15104</a></u>
<b>Cytogenetics:</b>	1q25.3
<b>Protein Pathways:</b>	Alanine, aspartate and glutamate metabolism, Arginine and proline metabolism, Metabolic pathways, Nitrogen metabolism
<b>Gene Summary:</b>	The protein encoded by this gene belongs to the glutamine synthetase family. It catalyzes the synthesis of glutamine from glutamate and ammonia in an ATP-dependent reaction. This protein plays a role in ammonia and glutamate detoxification, acid-base homeostasis, cell signaling, and cell proliferation. Glutamine is an abundant amino acid, and is important to the biosynthesis of several amino acids, pyrimidines, and purines. Mutations in this gene are associated with congenital glutamine deficiency, and overexpression of this gene was observed in some primary liver cancer samples. There are six pseudogenes of this gene found on chromosomes 2, 5, 9, 11, and 12. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Dec 2014]

Product images:



Circular map for RG204039