

Product datasheet for **RG204238**

Glutamine Synthetase (GLUL) (NM_001033044) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glutamine Synthetase (GLUL) (NM_001033044) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GLUL
Synonyms:	GLNS; GS; PIG43; PIG59
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG204238 representing NM_001033044 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGACCACCTCAGCAAGTCCCACTTAAATAAAGGCATCAAGCAGGTGTACATGTCCCTGCCTCAGGGTG
AGAAAGTCCAGGCCATGTATATCTGGATCGATGGTACTGGAGAAGGACTGCGCTGCAAGACCCGGACCCCT
GGACAGTGAGCCCAAGTGTGGAAGAGTTGCCTGAGTGGAAATTCGATGGCTCTAGTACTTTACAGTCT
GAGGGTCCAACAGTGACATGTATCTCGTGCCTGCTGCCATGTTTCGGGACCCCTCCGTAAGGACCCTA
ACAAGCTGGTGTATGTGAAGTTTTCAAGTACAATCGAAGGCCTGCAGAGACCAATTTGAGGCACACCTG
TAAACGGATAATGGACATGGTGAGCAACCAGCACCCCTGGTTTGGCATGGAGCAGGAGTATACCCTCATG
GGGACAGATGGGCACCCCTTTGGTTGGCCTTCCAACGGCTTCCCAGGGCCCCAGGGTCCATATTACTGTG
GTGTGGGAGCAGACAGAGCCTATGGCAGGGACATCGTGGAGGCCATTACCGGGCCTGCTGTATGCTGG
AGTCAAGATTGCGGGGACTAATGCCGAGGTCATGCCTGCCAGTGGGAATTTAGATTGGACCTTGTA
GGAATCAGCATGGGAGATCATCTCTGGGTGGCCGTTTCATCTTGATCGTGTGTGAAGACTTTGGAG
TGATAGCAACCTTTGATCCTAAGCCATTCTGGGAACGGAATGGTGCAGGCTGCCATACCAACTTCAG
CACCAAGGCCATGCGGGAGGAGAATGGTCTGAAGTACATCGAGGAGGCCATTGAGAACTAAGCAAGCGG
CACCAGTACCACATCCGTGCCTATGATCCCAAGGAGGCCTGGACAATGCCCGACGTCTAACTGGATTCC
ATGAAACCTCCAACATCAACGACTTTTCTGCTGGTGTAGCCAATCGTAGCGCCAGCATAACGATTCCCCG
GACTGTTGGCCAGGAGAAGAAGGTTACTTTGAAGATCGTCGCCCTCTGCCAACTGCGACCCCTTTTCG
GTGACAGAAGCCCTCATCCGCACGTGTCTTCTCAATGAAACCGGCATGAGCCCTCCAGTACAAAAAT

ACCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG204238 representing NM_001033044
Red=Cloning site Green=Tags(s)

MTTSASSHLNKGIKQVYMSLPQGEKVQAMYIWIDGTGEGLRCKTRTL DSEPKCVEELPEWNFDGSSTLQS
 EGSNSDMYL VPAAMFRDPFRKDPNKLVLCEVFKYNRRPAETNL RHTCKRIMDMVSNQHPWF GMEQEY TLM
 GTDGHFPGWPSNGFPGPQGPYYCGVGADRAYGRDIVEAHYRACLYAGVKIAGTNAEVMPAQWEFQIGPCE
 GISMGDHLWVARFILHRVCEDFGVIATFDPKPIPGNWNAGCHTNFSTKAMREENGLKYIEEAIEKLSKR
 HQYHIRAYDPKGLDNARRLTGFHETSNINDFSAGVANRSASIRIPRTVGVQEKGYFEDRRPSANCDPFS
 VTEALIRTCLLNETGDEPFQYKN

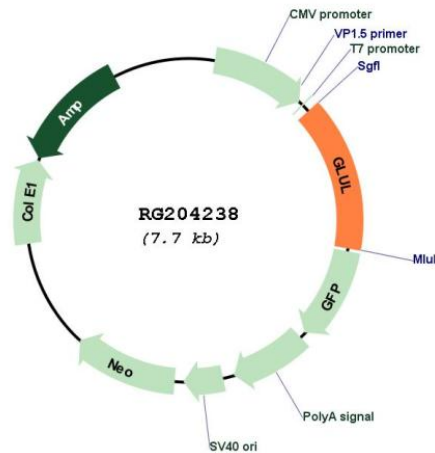
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001033044

ORF Size:	1119 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:	<ol style="list-style-type: none">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_001033044.4
RefSeq Size:	3143 bp
RefSeq ORF:	1122 bp
Locus ID:	2752
UniProt ID:	P15104
Cytogenetics:	1q25.3
Protein Pathways:	Alanine, aspartate and glutamate metabolism, Arginine and proline metabolism, Metabolic pathways, Nitrogen metabolism
Gene Summary:	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]