

Product datasheet for SC302691

Glutamine Synthetase (GLUL) (NM_001033056) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glutamine Synthetase (GLUL) (NM_001033056) Human Untagged Clone
Tag:	Tag Free
Symbol:	Glutamine Synthetase
Synonyms:	GLNS; GS; PIG43; PIG59
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC302691 representing NM_001033056. Blue=Insert sequence Red=Cloning site Green=Tag(s)

GCTCGTTTGTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
 GATCCGGTACCGAGGAGATCTGCCGCC**CGCATCGCC**
 ATGACCACCTCAGCAAGTTCCCACTTAAATAAAGGCATCAAGCAGGTGTACATGTCCTGCCTCAGGGT
 GAGAAAGTCCAGGCCATGTATATCTGGATCGATGGTACTGGAGAAGGACTGCGCTGCAAGACCCGGACC
 CTGGACAGTGAGCCCAAGTGTGTGAAGAGTTGCCTGAGTGAATTTTCGATGGCTCTAGTACTTTACAG
 TCTGAGGGTTCCAACAGTGACATGTATCTCGTGCCTGCTGCCATGTTTCGGGACCCCTTCCGTAAGGAC
 CCTAACAGCTGGTGTTATGTGAAGTTTCAAGTACAATCGAAGGCCTGCAGAGACCAATTTGAGGCAC
 ACCTGTAAACGGATAATGGACATGGTGAGCAACCAGCACCCCTGGTTTGGCATGGAGCAGGAGTATACC
 CTATGCGGACAGATGGGCACCCCTTTGGTTGGCCTTCCAACGGCTTCCAGGGCCCCAGGGTCCATAT
 TACTGTGGTGTGGGAGCAGACAGAGCCTATGGCAGGGACATCGTGGAGGCCATTACCGGCCTGCTTG
 TATGCTGGAGTCAAGATTGCGGGGACTAATGCCGAGGTATGCCTGCCAGTGGGAATTTTCAGATTGGA
 CCTTGTGAAGGAATCAGCATGGGAGATCATCTCTGGGTGGCCCGTTTCATCTTGCATCGTGTGTGTGAA
 GACTTTGGAGTGATAGCAACCTTTGATCCTAAGCCATTCTGGGAATGGAATGGTGCAGGCTGCCAT
 ACCAATTCAGCACCAAGGCCATGCGGGAGGAGAATGGTCTGAAGTACATCGAGGAGGCCATTGAGAAA
 CTAAGCAAGCGGCACCAAGTACCACATCCGTGCCTATGATCCCAAGGAGGCCCTGGACAATGCCCGACGT
 CTAAGTGGATTCCATGAAACCTCCAACATCAACGACTTTTCTGCTGGTGTAGCCAATCGTAGCGCCAGC
 ATACGCATTCGCCGACTGTTGGCCAGGAGAAGAGGTTACTTTGAAGATCGTCGCCCTCTGCCAAC
 TGCGACCCCTTTTCGGTGACAGAAGCCCTCATCCGCACGTGTCTTCTCAATGAAACCGGCGATGAGCCC
 TTCCAGTACAAAAAT**TAA**
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGAT
 TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC

Restriction Sites: SgfI-MluI


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ACCN:	NM_001033056
Insert Size:	1122 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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.
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:	<u>NM_001033056.3</u>
RefSeq Size:	7683 bp
RefSeq ORF:	1122 bp
Locus ID:	2752
UniProt ID:	<u>P15104</u>
Cytogenetics:	1q25.3
Protein Pathways:	Alanine, aspartate and glutamate metabolism, Arginine and proline metabolism, Metabolic pathways, Nitrogen metabolism
MW:	42.1 kDa

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]

Transcript Variant: This variant (3) differs in the 5' UTR compared to variant 1. Both variants 1, 2 and 3 encode the same protein. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.