

## Active Recombinant Human GLUL protein, His-tagged (Bioactivity Validated)

Cat. No. GLUL-18H Lot. No. (See product label)

### SPECIFICATION

#### Product Overview

Recombinant GLUL protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.

#### Species

Human

#### Source

E.coli

#### Description

Glutamine synthetase (GLUL), which is therefore able to regulate intracellular concentrations of glutamate. GLUL catalyzes the synthesis of glutamine from glutamate and ammonia. Glutamine is a main source of energy and is involved in cell proliferation, inhibition of apoptosis, and cell signaling. GLUL is essential for proliferation of fetal skin fibroblasts and plays an important role in controlling body pH by removing ammonia from circulation. Mutations in GLUL are associated with congenital glutamine deficiency.

#### Form

Liquid. In 20mM Tris-HCl buffer (pH8.0) containing 20% glycerol, 5mM DTT, 200mM NaCl

#### Bio-activity

Specific activity is >2,800 pmol/min/ug, and is defined as the amount of enzyme that convert 1.0 pmole of L-glutamate to L-glutamine per minute at pH 7.5 at 37centigrade in coupled system with PK/LDH.

#### Molecular Mass

44.2kDa (393aa), confirmed by MALDI-TOF

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**AA Sequence**

MGSSHHHHHH SSGLVPRGSH MTTSSASSHLN KGIKQVYMSL PQGEKVQAMY  
 IWIDGTGEGL RCKTRTL DSE PKCVEELPEW NFDGSSTLQS EGSNSDMYLV  
 PAAMFRDPFR KDPNKLVLCE VFKYNRRPAE TNLRHTCKRI MDMVSNQHPW  
 FGMEQEYTLM GTDGHPFGWP SNGFPGPQGP YYCGVGADRA YGRDIVEAHY  
 RACLYAGVKI AGTNAEVMPA QWEFQIGPCE GISMGDHLWV ARFILHRVCE  
 DFGVIATFDP KPIPGNWNGA GCHTNFSTKA MREENGLKYI EEAIEKLSKR  
 HQYHIRAYDP KGGLDNARRL TGFHETSNIN DFSAGVANRS ASIRIPRTVG  
 QEKKGYFEDR  
 RPSANCDPFS VTEALIRTCL LNETGDEPFQ YKN

**Purity** > 90% by SDS - PAGE

**Storage** Can be stored at +4centigrade short term (1-2 weeks). For long term storage, aliquot and store at -20centigrade or -70centigrade. Avoid repeated freezing and thawing cycles.

**Concentration** 1 mg/ml (determined by Bradford assay)

## GENE INFORMATION

**Gene Name** [GLUL glutamate-ammonia ligase \[ Homo sapiens \]](#)

**Official Symbol** [GLUL](#)

**Synonyms** GLUL; glutamate-ammonia ligase; glutamine synthetase; glutamine synthase; glutamate decarboxylase; glutamate--ammonia ligase; GS; GLNS; PIG43; PIG59;

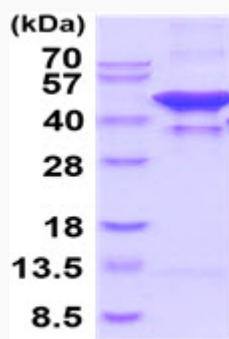
**Gene ID** [2752](#)

**mRNA Refseq** [NM\\_001033044](#)

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<b>Protein Refseq</b>	NP_001028216
<b>MIM</b>	138290
<b>UniProt ID</b>	P15104
<b>Chromosome Location</b>	1q31
<b>Pathway</b>	Alanine, aspartate and glutamate metabolism, organism-specific biosystem; Alanine, aspartate and glutamate metabolism, conserved biosystem; Amino acid synthesis and interconversion (transamination), organism-specific biosystem; Arginine and proline metabolism, organism-specific biosystem; Arginine and proline metabolism, conserved biosystem; Astrocytic Glutamate-Glutamine Uptake And Metabolism, organism-specific biosystem; GABAergic synapse, organism-specific biosystem;
<b>Function</b>	ATP binding; glutamate decarboxylase activity; glutamate-ammonia ligase activity; identical protein binding; ligase activity; lyase activity; nucleotide binding;
	 <p>15% SDS-PAGE (3ug)</p>

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