

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 RCKTRTLDSE PKCVEELPEW NFDGSSTLQS EGSNSDMYLV
 PAAMFRDPFR KDPNKLVLCE VFKYNRRPAE TNLRHTCKRI MDMVSNQHPW
 FGMEQEYTLN GTDGHFPFGWP 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

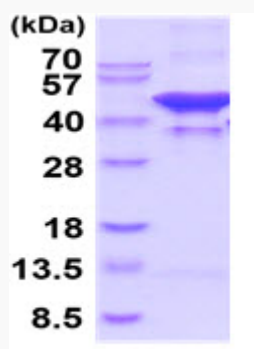
mRNA Refseq

NM_001033044

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Protein Refseq	NP_001028216
MIM	138290
UniProt ID	P15104
Chromosome Location	1q31
Pathway	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;
Function	ATP binding; glutamate decarboxylase activity; glutamate-ammonia ligase activity; identical protein binding; ligase activity; lyase activity; nucleotide binding;
 (kDa) 70 57 40 28 18 13.5 8.5 15% SDS-PAGE (3ug)	