

Bioactive

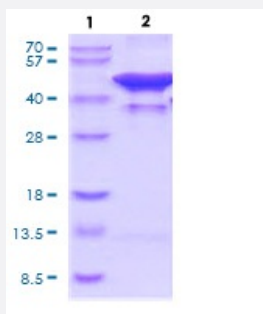
Full-Length

GLUL (Human) Recombinant Protein

Catalog # P7988

Size 100 ug

Applications



Specification

Product Description

Human GLUL (P15104, 1 a.a. - 373 a.a.) full length recombinant protein with His tag expressed in *Escherichia coli*.

Sequence

MTTSASSHLNKGIKQVYMSLPQGEKVQAMYWIDGTGEGLRCKTRTLTLDSEPKCVEELPEWNFDG
SSTLQSEGSNSDMYLVPAAMFRDPFRKDPNKLVLCEVFKYNRRPAETNLRHTCKRIMDMVSNQH
PWFGMEQEYTLMGTDGHPFGWPSNGFPGPQGPYCGVGADRAYGRDVEAHYRACLYAGVKIA
GTNAEVMPAQWEFQIGPCEGISMGDHLWVARFILHRVCEDFGVIATFDPKPIPGNWNGAGCHTNF
STKAMREENGLKYEEAIEKLSKRHQYHIRAYDPKGGLDNARRLTGFHETSNINDFSAGVANRSASI
RIPRTVGQEKKGYFEDRRPSANCDPFSVTEALIRTCLLNETGDEPFQYKN

Host

Escherichia coli

Theoretical MW (kDa)

44.2

Form

Liquid

Preparation Method

Escherichia coli expression system

Purity

> 90% by SDS-PAGE

Activity

Specific activity is > 2800 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 37°C in coupled system with PK/LDH.

Quality Control Testing

3 ug by SDS-PAGE under reducing condition and visualized by Coomassie blue stain.

Storage Buffer

In 20mM Tris-HCl pH 8.0 (20% glycerol, 200 mM NaCl, 5 mM DTT)

Storage Instruction

Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.

Applications

- Functional Study
- SDS-PAGE

Gene Info — GLUL

Entrez GeneID

[2752](#)

Protein Accession#

[P15104](#)

Gene Name

GLUL

Gene Alias

GLNS, GS, PIG43, PIG59

Gene Description

glutamate-ammonia ligase (glutamine synthetase)

Omim ID

[138290 610015](#)

Gene Ontology

[Hyperlink](#)

Gene Summary

Glutamine is a main source of energy and is involved in cell proliferation, inhibition of apoptosis, and cell signaling (Haberle et al., 2005 [PubMed 16267323]). Fetal glutamine requirements are very high and depend largely on active glutamine synthesis and the release of glutamine into the fetal circulation by the placenta. Glutamine synthetase (EC 6.3.1.2), also called glutamate-ammonia ligase (GLUL), is expressed throughout the body and plays an important role in controlling body pH and in removing ammonia from the circulation. The enzyme clears L-glutamate, the major neurotransmitter in the central nervous system, from neuronal synapses (see references in Clancy et al., 1996 [PubMed 8975719]).[supplied by OMIM]

Other Designations

OTTHUMP00000035524|OTTHUMP00000035525|cell proliferation-inducing protein 59|glutamate-ammonia ligase (glutamine synthase)|glutamine synthetase|proliferation-inducing protein 43

Pathway

- [Alanine](#)
- [Arginine and proline metabolism](#)

- [Metabolic pathways](#)
- [Nitrogen metabolism](#)

Disease

- [Cognition](#)
- [Genetic Predisposition to Disease](#)
- [Schizophrenia](#)
- [Schizophrenic Psychology](#)
- [Weight Gain](#)