

# Recombinant human Glutamine synthetase/GLUL protein

Catalog Number: ATGP3404

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-373aa

### UniProt No.

P15104

### NCBI Accession No.

NP\_001028216

### Alternative Names

Glutamine synthase, Glutamate-ammonia ligase, GLNS, Glutamate-ammonia ligase, GS, Palmitoyltransferase  
GLUL

## PRODUCT SPECIFICATION

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### Molecular Weight

42 kDa (373aa) confirmed by MALDI-TOF

### Concentration

1mg/ml (determined by absorbance at 280nm)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol, 1mM DTT, 0.1mM PMSF

### Purity

> 85% by SDS-PAGE

### Biological Activity

Specific activity is > 2.000pmol/min/ug, and is defined as the amount of enzyme that convert L-glutamate to L-glutamine per miunte at pH 7.5 at 37C in coupled system with PK/LDH.

### Tag

Non-Tagged

### Application

SDS-PAGE, Enzyme Activity

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

GLUL also known as Glutamine synthetase. It is a trimetallic enzyme containing two divalent cation sites and one monovalent cation site per subunit. GLUL is able to regulate intracellular concentrations of glutamate and

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catalyzes the synthesis of glutamine from glutamate and ammonia. It is ubiquitously expressed in the human and plays a major role for many metabolic pathways such as cell proliferation, inhibition of apoptosis, and cell signaling. Recombinant Human GLUL was expressed in *E. coli* and purified by using conventional chromatography techniques

## Amino acid Sequence

MTTSASSHLN KGIKQVYMSL PQGEKVQAMY IWIDGTGEGE RCKTRTLDSE PKCVELPEW NFDGSSTLQS EGSNSDMYLV  
PAAMFRDPFR KDPNKLVLCE VFYNNRRPAE TNLRHTCKRI MDMVSNQHPW FGMEQEYTLT GTDGHPFGWP  
SNGFPGPQGP YYCGVGADRA YGRDIVEAHY RACLYAGVKI AGTNAEVMPA QWEFQIGPCE GISMGDHLWV ARFILHRVCE  
DFGVIATFDP KPIPGNWNGA GCHTNFSTKA MREENGLKYI EEAIEKLSKR HOYHIRAYDP KGGLDNARRL TGFHETSNIN  
DFSAGVANRS ASIRIPRTVG QEKKGYFEDR RPSANCDPFS VTEALIRTCL LNETGDEPFQ YKN

## General References

Liaw SH., et al. (1995) *Protein Sci.* 4(11): 2358-65.

Vermeulen T., et al. (2008) *Arch Biochem Biophys.* 478(1): 96-102.

## DATA

### SDS-PAGE

(kDa)

70  
57  
40  
28  
18  
13.5  
8.5



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

15% SDS-PAGE (3ug)