NKMAXBio we support you, we believe in your research Recombinant human Glutamine synthetase/GLUL protein Catalog Number: ATGP3431

# **PRODUCT INFORMATION**

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**

### **Molecular Weight**

44.2 kDa (393aa) confirmed by MALDI-TOF

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

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 20% glycerol, 5mM DTT, 200mM NaCl

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

## **Biological Activity**

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

**Tag** His-Tag

**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

### 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



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

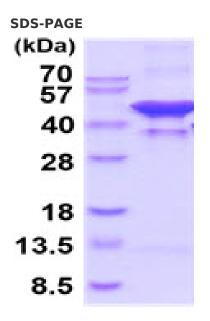
#### **Amino acid Sequence**

MGSSHHHHHH SSGLVPRGSH MTTSASSHLN KGIKQVYMSL PQGEKVQAMY IWIDGTGEGL RCKTRTLDSE 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

#### **General References**

Vermeulen T., et al, (2008) Arch Biochem Biophys. 478:96-102 Liaw SH., et al. (1995) Protein Sci. 4 (11): 2358-65.

## DATA



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

15% SDS-PAGE (3ug)