

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 L-glutamate to L-glutamine per minute 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 His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

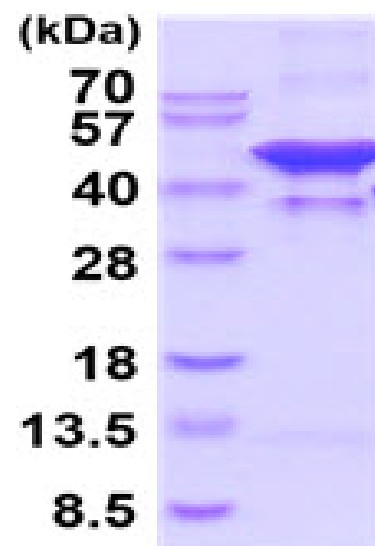
MGSSHHHHHH SSGLVPRGSH MTTSSASSHLN KGIKQVYMSL PQGEKVQAMY IWIDGTGEGL RCKTRTLDSE PKCVEELPEW
NFDGSSTLQS EGSNSDMYLV PAAMFRDPFR KDPNKLVLCE VFKNRRPAE TNLRHTCKRI MDMVSNQHPW FGMEQEYTLN
GTDGHPFGWP SNGFPGPQGP YYCGVGADRA YGRDIVEAHY RACLYAGVKI AGTNAEVMPA QWEFQIGPCE
GISMGDHLWV ARFILHRVCE DFGVIATFDP KPIPGNWNGA GCHTNFSTKA 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

SDS-PAGE



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

15% SDS-PAGE (3ug)