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## Product Data Sheet

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Product Name: GLUL Human  
 Cat. No.: GP21693  
 Batch No.: 1

### Product Data

|                     |  |                    |                         |
|---------------------|--|--------------------|-------------------------|
| Purity              | >98%   | Source             | Escherichia Coli.       |
| Physical Appearance | solid  | Shipping Condition | Shipped with Ice Packs. |
| Synonyms            | GLNS; EC 6.3.1.2; EC 4.1.1.15; GLUL; Glutamine Synthetase; GS; Glutamate decarboxylase; Glutamate--ammonia ligase; PIG43; PIG59.   |                    |                         |
| Amino Acid Sequence | MGSSHHHHHH SGLVPRGSH MTTASSHLN KGIKQVYMSL PQGEKVQAMY<br>IWIDGTGEGE RCKTRTL DSE PKCVEELPEW NFDGSSTLQS EGSNSDMYLV<br>PAAMFRDPFR KDPNKLVLCE VFKYNRRPAE TNLRHTCKRI MDMVSNQHPW<br>FGMEQEY TLM GTDGH PFGWP SNGFPGPQGP YYCGVGADRA YGRDIVEAHY<br>RACLYAGVKI AGTNAEVMPA QWEFQIGPCE GISMGDHLWV ARFILHRVCE<br>DFGVIATFDP KPIPGNWNGA GCHTNFSTKA MREENGLKYI EEAIEKLSKR<br>HQYHIRAYDP KGGLDNARRL TGFHETSNIN DFSAGVANRS ASIRIPRTVG<br>QEKKG YFEDR RPSANCDPFS VTEALIRTCL LNETGDEPFQ YKN. |                    |                         |
| Formulation         | GLUL Human solution containing 20mM Tris-HCl pH-8, 5mM DTT, 0.2M NaCl & 20% glycerol.  |                    |                         |

### Introduction

GLUL catalyzes the synthesis of glutamine from glutamate and ammonia. Glutamine is a major source of energy and that takes part in cell proliferation, inhibition of apoptosis, and cell signaling. GLUL is expressed during early fetal stages, and has a role in maintaining body pH by removing ammonia from circulation. Mutations in GLUL gene are related with congenital glutamine deficiency.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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GLUL Recombinant Human produced in E.Coli is a single, non-glycosylated polypeptide chain containing 393 amino acids (1-373 a.a.) and having a molecular mass of 44.2 kDa. The GLUL is fused to a 20 amino acid His-Tag at N-terminus and purified by proprietary chromatographic techniques.

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