

Recombinant Human GLUD1, His-tagged

Cat. No. GLUD1-160H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	GLUD1, 54-558aa, Human, His tag, E.coli
Species	Human
Source	E.coli
ProteinLength	54-558aa
Description	Glutamate dehydrogenase 1, mitochondrial precursor, also known as GLUD1, belongs to the Glu/Leu/Phe/Val dehydrogenases family. GLUD1 has a central role in nitrogen metabolism in plants and animals. GLUD1 is found in all organisms and catalyzes the oxidative deamination of 1-glutamate to 2-oxoglutarate. Mutations in the gene encoding GLUD1 causes hyperinsulinism-hyperammonemia syndrome (HHS), which is an inherited condition characterized by high insulin and ammonia levels in the blood. GLUD1 may also be involved in learning and memory reactions by increasing the turnover of the excitatory neurotransmitter glutamate. Recombinant human GLUD1 protein, fused to His-tag at N-terminus, was expressed in E.coli.
Form	Liquid. In 20mM Tris-HCl buffer (pH 8.0) containing 0.4M Urea, 10% glycerol
Molecular Mass	58.4 kDa (528aa)
AA Sequence	MGSSHHHHHH SSGLVPRGSH MGSSEAVADR EDDPNFFKMV EGFFDRGASI VEDKLVEDLR TRESEEQKRN RVRGILRIK PCNHVLSLSF PIRDDGSWE VIEGYRAQHS QHRTPCGGI RYSTDVSVDK VKALASLMTY KCAVVDVPFG

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

GAKAGVKINP KNYTDNELEK ITRRFTMELA KKGFIGPGID VPAPDMSTGE
 REMSWIADTY ASTIGHYDIN AHACVTGKPI SQGGIHGRIS ATGRGVFHGI
 ENFINEASYM SILGMTPGFG DKTFVVQGFG NVGLHSMRYL HRFGAKCIAV
 GESDGSIWNP DGIDPKELED FKLQHGSILG FPKAKPYEGS ILEADCDILI
 PAASEKQLTK SNAPRVKAKI IAEGANGPTT PEADKIFLER NIMVIPDLYL
 NAGGVTVSYF EWLKLNHVS YGRLTFKYER DSNYHLLMSV QESLERKFGK
 HGGTIPIVPT AEFQDRISGA SEKDIVHSG L AYT MERSARQ IMRTAMKYNL
 GLDLRTAAYV NAIEKVFKVY NEAGVTFT

Purity >80% by SDS - PAGE

Storage Can be stored at +4C short term (1-2 weeks). For long term storage, aliquot and store at -20C or -70C. Avoid repeated freezing and thawing cycles.

Concentration 1mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name [GLUD1 glutamate dehydrogenase 1 \[Homo sapiens \]](#)

Official Symbol GLUD1

Synonyms GLUD1; glutamate dehydrogenase 1; GLUD; glutamate dehydrogenase 1, mitochondrial; GDH; GDH 1; glutamate dehydrogenase (NAD(P)+); GDH1; MGC132003;

Gene ID [2746](#)

mRNA Refseq [NM_005271](#)

Protein Refseq [NP_005262](#)

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MIM	138130
UniProt ID	P00367
Chromosome Location	10q23.2
Pathway	Alanine, aspartate and glutamate metabolism, organism-specific biosystem; Alanine, aspartate and glutamate metabolism, conserved biosystem; Amino acid synthesis and interconversion (transamination), organism-specific biosystem; Arginine and proline metabolism, organism-specific biosystem; Arginine and proline metabolism, conserved biosystem; D-Glutamine and D-glutamate metabolism, organism-specific biosystem; D-Glutamine and D-glutamate metabolism, conserved biosystem;
Function	ADP binding; ATP binding; GTP binding; NAD ⁺ binding; glutamate dehydrogenase (NAD ⁺) activity; glutamate dehydrogenase [NAD(P) ⁺] activity; glutamate dehydrogenase [NAD(P) ⁺] activity; identical protein binding; leucine binding; nucleotide binding; oxidoreductase activity; protein binding;