
Product Data Sheet

Product Name: GLUD1 Human

Cat. No.: GP21692

Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Glutamate Dehydrogenase 1; GLUD; GDH 1; EC 1.4.1.3; GDH; GDH1; Glutamate Dehydrogenase (NAD(P)+); Glutamate Dehydrogenase 1 Mitochondrial; EC 1.4.1; GLUD1.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGSSEAVADR EDDPNFFKMV EGFFDRGASI VEDKLVEDLR TRESEEQKRN RVRGILRIIK PCNHVLSLSF PIRRDDGSWE VIEGYRAQHS QHRTPCGGI RYSTDVSVDE VKALASLMTY KCAVVDVDPFG GAKAGVKINP KNYTDNELEK ITRRFTMELA KKGFIGPGID VPAPDMSTGE REMSWIADTY ASTIGHYDIN AHACVTGKPI SQGGIHGRIS ATGRGVFHGI ENFINEASYM SILGMTPGFG DKTFVVQGFV NVGLHSMRYL HRFQAKCIAV GESDGSIWNP DGIDPKELED FKLQHGSILG FPKAKPYEGS ILEADCIL PAASEKQLTK SNAPRVKAKI IAEGANGPTT PEADKIFLER NIMVIPDLYL NAGGVTVSYP EWLKLNHVS YGRLTFKYER DSNYHLLMSV QESLERKFGK HGGTIPIVPT AEFQDRISGA SEKDIVHSGV AYTMEARSARQ IMRTAMKYNL GLDLRTAAYV NAIEKVFKVY NEAGVTFT.		
Formulation	The GLUD1 solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.4M Urea and 10% glycerol.		

Introduction

Glutamate dehydrogenase 1, mitochondrial precursor (GLUD1) is a member of the Glu/Leu/Phe/Val dehydrogenases family. GLUD1 is a mitochondrial glutamate dehydrogenase, which converts L-glutamate into alpha-ketoglutarate. GLUD1 has a pivotal role in nitrogen metabolism in plants and animals. GLUD1 is observed in all organisms and catalyzes the oxidative deamination of L-glutamate to 2-oxoglutarate. The GLUD1 enzyme has a vital role in regulating amino acid induced insulin secretion. GLUD1 gene mutations cause hyperinsulinism-hyperammonemia syndrome (HHS), which

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

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is an inherited condition characterized by high insulin and ammonia levels in the blood. GLUD1 enzyme is allosterically activated by ADP and inhibited by GTP and ATP.

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

GLUD1 Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 528 amino acids (54-558) and having a molecular mass of 58.4kDa. GLUD1 is fused to a 23 amino acid His-tag at N-terminus.

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