
Product Data Sheet

Product Name: GAD1 Human
 Cat. No.: GP21649
 Batch No.: 1

Product Data

Purity	>98%	Source	E.coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Glutamate Decarboxylase 1 (Brain; 67kDa); GAD; Glutamate Decarboxylase 67 KDa Isoform; 67 KDa Glutamic Acid Decarboxylase; GAD-67; EC 4.1.1.15; CPSQ1; SCP; Glutamate Decarboxylase 1 (Brain; 67kD); Glutamate Decarboxylase 1; GAD67; EC 4.1.1; GAD1.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGSMASSTPS SSATSSNAGA DPNTTNRPT TYDTWCGVAH GCTRKLGLKI CGFLQRTNSL EEKSRLVSAF KERQSSKNLL SCENSDRDAR FRRTETDFSN LFARDLLPAK NGEEQTVQFL LEVVDILLNY VRKTFDRSTK VLDFHHPHQL LEGMEGFNLE LSDHPESLEQ ILVDCRDTLK YGVRTGHPRF FNQLSTGLDI IGLAGEWLTS TANTNMPSDM RECWLLR.		
Formulation	The GAD1 solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH8.0), 10% glycerol and 0.4M Urea.		

Introduction

Glutamate Decarboxylase 1 (GAD1) is one of several forms of glutamic acid decarboxylase. GAD1 is responsible for catalyzing the production of gamma-aminobutyric acid from L-glutamic acid. A pathogenic role for the GAD1 enzyme has been identified in the human pancreas since it has been detected as an autoantigen and an autoreactive T cell target type II diabetes. The GAD1 protein may also have a role in the stiff man syndrome. GAD1 enzyme deficiency leads to pyridoxine dependency with seizures. GAD1 also catalyzes the production of GABA.

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.

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

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Background

GAD1 Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 247 amino acids (1-224) and having a molecular mass of 27.7kDa. GAD1 is fused to a 23 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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