
Product Data Sheet

Product Name: GAD1 iso1 Human
 Cat. No.: GP21650
 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); GlutamateDecarboxylase 67 KDa Isoform; 67 KDa Glutamic Acid Decarboxylase; EC 4.1.1.15;GAD-67; CPSQ1; SCP; GAD; Glutamate Decarboxylase 1 (Brain; 67kD); GlutamateDecarboxylase 1; EC 4.1.1; GAD67; Glutamate decarboxylase 1.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGSMASSTPS SSATSSNAGA DPNTTNLRPT TYDTWCGVAH GCTRKLGLKICGFLQRTNSL EEKSRLVSAF KERQSSKNLL SCENSDRDAR FRRTETDFSN LFARDLLPAK NGEEQTVQFLLEVVDILLNY VRKTFDRSTK VLDFHHPHQL LEGMEGFNLELSDHPESELEQ ILVDICRDTLK YGVRTGHPRF FNQLSTGLDI IGLAGEWLTSTANTNMFTYE IAPVFLMEQ ITLKKMREIV GWSSKDG DGI FSPGGAISNM YSIMAARYKY FPEVKTGMAAVPKLVLFST EQSHYSIKKA GAALGFGTDN VILIKCNERG KIIPADFEAK ILEAKQKGYVPFYVNATAGT TVYGAFDPIQ EIADICEKYN LWLHVDAAWG GLLMSRKHRHKLNGIERAN SVTWNPHKMM GVLLQCSAIL VKEKGILQGC NQMCAGYLFQ PDKQYDVSYD TGDKAIQCGRHVDIFKFWLM WKAKGTVGFE NQINKCLELA EYLYAKIKNR EEFEMVFNGE PEHTNVCFWYIPQSLRGVDP SPQRREKLHKVAPKIKALMM ESGTTMVG YQ PQGDKANFFR MVISNPAATQ SDIDFLIEEI ERLGQDL.		
Formulation	GAD1 iso1 protein solution (0.5mg/ml) containing 20mM Tris-HCl buffer (pH 8.0) and 10% glycerol.		

Introduction

Glutamate Decarboxylase 1 Isoform-1, also known as GAD1 iso1 belongs to the group II decarboxylase family. GAD1 iso1 encodes one of several forms of glutamic acid decarboxylase, and is identified as a major autoantigen in insulin-dependent diabetes.

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

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GAD1 iso1 is in charge for catalyzing the production of gamma-aminobutyric acid from L-glutamic acid. In addition, a pathogenic function for GAD1 iso1 has been shown in the human pancreas while it has been identified as an autoantigen & an autoreactive T cell target in insulin-dependent diabetes. GAD1 iso1 play a role in the stiff man syndrome. It has been shown that deficiency in this enzyme has led to pyridoxine dependency with seizures.

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

GAD1 iso1 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 617 amino acids (1-594 a.a) and having a molecular mass of 69.3kDa. GAD1 iso1 is fused to a 23 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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