Recombinant Human GAD1, His-tagged

Cat. No. GAD1-149H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	GAD1, 1-224aa, Human, His tag, E.coli
Species	Human
Source	E.coli
ProteinLength	1-224aa
Description	GAD1 is one of several forms of glutamic acid decarboxylase, identified as a major autoantigen in insulin-dependent diabetes. It is responsible for catalyzing the production of gamma-aminobutyric acid from L-glutamic acid. A pathogenic role for this enzyme has been identified in the human pancreas since it has been identified as an autoantigen and an autoreactive T cell target in insulin-dependent diabetes. This protien may also play a role in the stiff man syndrome. Deficiency in this enzyme has been shown to lead to pyridoxine dependency with seizures. Alternative splicing of this gene results in two products, the predominant 67-kD form and a less-frequent 25-kD form. Recombinant human GAD1 protein, fused to His-tag at N-terminus, was expressed in E.coli .
Form	Liquid. In 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol, 0.4M Urea
Molecular Mass	27.7 kDa (247 aa)
AA Sequence	MGSSHHHHHH SSGLVPRGSH MGSMASSTPS SSATSSNAGA DPNTTNLRPT TYDTWCGVAH GCTRKLGLKI CGFLQRTNSL EEKSRLVSAF KERQSSKNLL

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	SCENSDRDAR FRRTETDFSN LFARDLLPAK NGEEQTVQFL LEVVDILLNY VRKTFDRSTK VLDFHHPHQL LEGMEGFNLE LSDHPESLEQ ILVDCRDTLK YGVRTGHPRF FNQLSTGLDI IGLAGEWLTS TANTNMPSDM RECWLLR
Purity	>85 % 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	0.5 mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name	GAD1 glutamate decarboxylase 1 (brain, 67kDa) [Homo sapiens]
Official Symbol	GAD1
Synonyms	GAD1; glutamate decarboxylase 1 (brain, 67kDa); GAD, glutamate decarboxylase 1 (brain, 67kD); glutamate decarboxylase 1; GAD-67; 67 kDa glutamic acid decarboxylase; glutamate decarboxylase 67 kDa isoform; GAD; SCP; CPSQ1; FLJ45882;
Gene ID	2571
mRNA Refseq	NM_000817
Protein Refseq	NP_000808
MIM	605363
UniProt ID	Q99259

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Chromosome Location	2q31
Pathway	Alanine and aspartate metabolism, organism-specific biosystem; Alanine, aspartate and glutamate metabolism, organism-specific biosystem; Alanine, aspartate and glutamate metabolism, conserved biosystem; Biogenic Amine Synthesis, organism-specific biosystem; Butanoate metabolism, organism-specific biosystem; Butanoate metabolism, conserved biosystem; GABA (gamma-Aminobutyrate) shunt, organism-specific biosystem;
Function	carboxy-lyase activity; glutamate decarboxylase activity; lyase activity; protein binding; pyridoxal phosphate binding;

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