

Recombinant Human GAD1, His-tagged

Cat. No. GAD1-13106H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human GAD1 protein, fused to His-tag, was expressed in E.coli and purified by Ni-sepharose.
Species	Human
Source	E.coli
ProteinLength	1-224a.a.
Description	<p>This gene encodes one of several forms of glutamic acid decarboxylase, identified as a major autoantigen in insulin-dependent diabetes. The enzyme encoded 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 gene 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.</p>
Source	E.coli
Species	Human
Tag	His

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Storage	The protein is stored in PBS buffer at -20°C. Avoid repeated freezing and thawing cycles.
Storage Buffer	1M PBS (58mM Na ₂ HPO ₄ , 17mM NaH ₂ PO ₄ , 68mM NaCl, pH8.) added with 300mM Imidazole and 0.7% Sarcosyl, 15% glycerol.
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
Chromosome Location	2q31
Pathway	Alanine and aspartate metabolism, organism-specific biosystem; Alanine, aspartate

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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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