# Recombinant human GAD1/GAD67 protein

Catalog Number: ATGP2838

## PRODUCT INFORMATION

**Expression system**
E.coli

**Domain**
1-594aa

**UniProt No.**
Q99259

**NCBI Accession No.**
NP_000808.2

**Alternative Names**
Glutamate decarboxylase 1, CPSQ1, GAD, SCP

## PRODUCT SPECIFICATION

**Molecular Weight**
69.3 kDa (617aa)

**Concentration**
0.5mg/ml (determined by Bradford assay)

**Formulation**
Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol

**Purity**
> 80% by SDS-PAGE

**Tag**
His-Tag

**Application**
SDS-PAGE, Denatured

**Storage Condition**
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

**Description**
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 protein may also play a role in the stiff man syndrome. Deficiency in this enzyme has been shown to lead to pyridoxine dependency with seizures. Recombinant human GAD1 protein, fused to His-tag at N-

terminus, was expressed in E. coli.

**Amino acid Sequence**

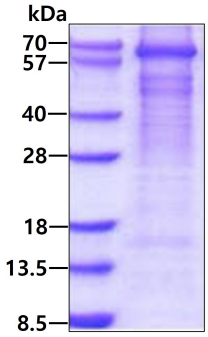
<MGSSHHHHHH SSGLVPRGSH MGS>MASSTPS SSATSSNAGA DPNTTNLRPT TYDTWCGVAH GCTRKLGLKI CGFLQRTNSL EEKSRLVSAF KERQSSKNLL SCENSDRDAR FRRTETDFSN LFARDLLPAK NGEEQTVQFL LEVVDILLNY VRKTFDRSTK VLDFHHPHQL LEGMEGFNLE LSDHPESLEQ ILVDCRDTLK YGVRTGHPRF FNQLSTGLDI IGLAGEWLTS TANTNMFTYE IAPVFVLMEQ ITLKKMREIV GWSSKDGDGI FSPGGAISNM YSIMAARYKY FPEVKTKGMA AVPKLVLFTS EQSHYSIKKA GAALGFGTDN VILIKCNERG KIIPADFEAK ILEAKQKGYV PFYVNATAGT TVYGAFDPIQ EIADICEKYN LWLHVDAAWG GGLLMSRKHR HKLNGIERAN SVTWNPHKMM GVLLQCSAIL VKEKGILQGC NQMCAGYLFQ PDKQYDVSYD TGDKAIQCGR HVDIFKFWLM WKAKGTVGFE NQINKCLELA EYLYAKIKNR EEFEMVFNGE PEHTNVCFWY IPQSLRGVPD SPQRREKLHK VAPKIKALMM ESGTTMVGYQ PQGDKANFFR MVISNPAATQ SDIDFLIEEI ERLGQDL

**General References**

Lynex C.N., et al. (2004) BMC Neurol. 4:20-20

## DATA

**SDS-PAGE**




3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.