

# Recombinant Full Length Human GAD1 Protein, C-Flag-tagged

**Cat. No.** GAD1-783HFL    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Full Length Human GAD1 Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Source</b>           | Mammalian Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | <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> |
| <b>Form</b>             | 25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Molecular Mass</b>   | 66.7 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>AA Sequence</b>      | <p>MASSTPSSSATSSNAGADPNTTNLRPTTYDTWCGVAHGCTRKLGLKICGFLQRTNS<br/>         LEEKSRLVSAFKER QSSKNLLSCENS DRDARFRRTETDFS NLFARDLLPAKNGEEQ<br/>         TVQFLLEVVDILLNYVRKTFDRSTKVLD FHHPHQLLEGMEGFNLELSDHPESLEQILV<br/>         DCRDTLKYGVRTGHPRFFNQLSTGLDIIGLAGEWLTSTAN TNMFTYEIAPVFVLMEQ</p>                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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ITLKKMREIVGWSSKDGIGIFSPGGAISNMYSIMAARYKYFPEVKTGMAAVP KLVL  
 FTSEQSRYSIKKAGAALGFGTDNVILIKCNERGEIIPADFEAKILEAKQKGYVPFYVNA  
 TAGTTVY GAFDPIQEIADICEKYNLWLHVDAAWGGGLLMSRKHRHKLNGIERANSV  
 TWNPHKMMGVLLQCSAILVKE KGILQGCNQMCAGYLFQPKQYDVSYDTGDKAIQ  
 CGRHVDIFKFWLMWKAKGTVGFENQINKCLELAEYL YAKIKNREEFEMVFNGEPEH  
 TNVCFWYIPQSLRGVPDSPQRREKLHKVAPKIKALMMESGTTMVGYPQPG  
 DKANFFRMVISNPAATQSDIDFLIEEIERLGQDLTRTRPLEQKLISEEDLAANDILDYKD  
 DDDKV

|                         |                                                                                                                                                                              |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>           | > 80% as determined by SDS-PAGE and Coomassie blue staining.                                                                                                                 |
| <b>Stability</b>        | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.                                |
| <b>Storage</b>          | Store at -80 centigrade.                                                                                                                                                     |
| <b>Concentration</b>    | >50 ug/mL as determined by microplate BCA method.                                                                                                                            |
| <b>Preparation</b>      | Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.                                                             |
| <b>Protein Families</b> | Druggable Genome                                                                                                                                                             |
| <b>Protein Pathways</b> | Alanine, aspartate and glutamate metabolism, beta-Alanine metabolism, Butanoate metabolism, Metabolic pathways, Taurine and hypotaurine metabolism, Type I diabetes mellitus |
| <b>Full Length</b>      | Full L.                                                                                                                                                                      |

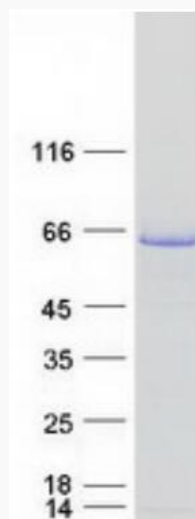
## GENE INFORMATION

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|                        |                                                         |
|------------------------|---------------------------------------------------------|
| <b>Gene Name</b>       | GAD1 glutamate decarboxylase 1 [ Homo sapiens (human) ] |
| <b>Official Symbol</b> | GAD1                                                    |
| <b>Synonyms</b>        | GAD; SCP; CPSQ1; DEE89                                  |
| <b>Gene ID</b>         | 2571                                                    |
| <b>mRNA Refseq</b>     | NM_000817.3                                             |
| <b>Protein Refseq</b>  | NP_000808.2                                             |
| <b>MIM</b>             | 605363                                                  |
| <b>UniProt ID</b>      | Q99259                                                  |



Coomassie blue staining of purified GAD1 protein.

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