Human GAD67 / GAD1 Protein (His Tag)

Catalog Number: 12570-H08B

General Information

Gene Name Synonym:

CPSQ1; GAD; SCP

Protein Construction:

A DNA sequence encoding the human GAD1 (Q99259-1) (Met 1-Leu 594) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 80 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Met 1

Molecular Mass:

The recombinant human GAD1 consists of 605 amino acids and predicts a molecular mass of 68.3 kDa. It migrates as an approximately 64 kDa band in SDS-PAGE in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, 10% gly, pH 8.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

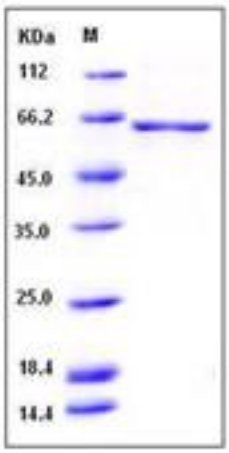
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Glutamate decarboxylase 1, also known as 67 kDa glutamic acid decarboxylase, Glutamate decarboxylase 67 kDa isoform and GAD1, is a member of thegroup II decarboxylase family. GAD1 is expressed in benign and malignant prostatic tissue and may serve as a highly prostate-specific tissue biomarker. GAD1 isoform3 is expressed in pancreatic islets, testis, adrenal cortex, and perhaps other endocrine tissues, but not in brain. Tissue-specific markers are useful for identification of tumour type in advanced cancers of unknown origin. In plants, as in most eukaryotes, glutamate decarboxylase catalyses the synthesis of GABA. Root-specific calcium/calmodulin-regulated GAD1 plays a major role in GABA synthesis in plants under normal growth conditions and in response to stress. Defects in GAD1 are the cause of cerebral palsy spastic quadriplegic type 1 (CPSQ1)which is a non-progressive disorder of movement and/or posture resulting from defects in the developing central nervous system. Affected individuals manifest symmetrical, non-progressive spasticity and no adverse perinatal history or obvious underlying alternative diagnosis.

References

1.Bouché,N. et al., 2004, Plant Mol Biol. 55 (3):315-25. 2.Huang,H.S. et al., 2007, PLoS One. 2 (8):e809. 3.Fenalti G., et al., 2007, Nat. Struct. Mol. Biol. 14:280-286.