



Human Glutamic Acid Decarboxylase 65kDa Isoform (Full-length GAD65)

Origin:	Recombinant	Cat. No.:	41842
Tag:	N-terminal 6xHis	Size:	0.1 mg
Source:	<i>Spodopterafrugiperda</i> Sf9	Purity:	>95%
Species:	Human	Abbreviation	fl-GAD65

Description

Expressed in Baculovirus-sf9 vector expression system with total 612 amino acids (AA). Mw: 67.65 KDa (calculated).

N-terminal 6xHis-tag and TEV cleavage site, 25 extra AA (highlighted).

Recombinant antigen for research use or manufacturing only.

Introduction to the Molecule

GAD65 is primarily expressed in neuron cells and pancreas β -cells. It works as a catalyser in GABA synthesis.

Glutamic acid decarboxylase autoantibodies (GADA) are found in 70% to 80% of individuals with new-onset type 1 diabetes, making it the most frequent autoantibody in autoimmune diabetes. GADA can be detected in serum for many years post diagnosis, and high concentrations of GADA have been considered as a marker of faster β -cell exhaustion in these patients. Furthermore, GADA in non-diabetic individuals predicts the later development of type 1 diabetes¹. Besides autoimmune diabetes, GADA also exists in Stiff Man Syndrome, autoimmune poly-endocrinopathies, and some of Grave's Disease patients.

Immunological Function

As an autoantigen, GAD65 binds with IgG-type human autoantibodies.

Applications

Bio-functional study, ELISA, radioimmunoassay

Amino Acid Sequence

MSYYHHHHHDYDIPTTENLYFQGAASPGSGFWSFGSEDSGSDSENPGTARAWCQVAQ
KFTGGIGNKLCALLYGDAEKPAESGGSQPPRAAARKAACACDQKPCSCSKVDVNYAFLHATDL
LPACDGERPTLAFLQDVMNILLQYVVKSFDRSTKVIDFHYPNELLQEYNWELADQPQNLEEILMH
CQTTLKYAIKTGHPRYFNQLSTGLDMVGLAADWLTSTANTNMFTYEIAPVFVLLLEYVTLKKMREI
IGWPGGSGDGIFSPGGAISNMYAMMIARFKMFPEVKEKGMALPRLIAFTSEHSHFSLKKGAAA
LGIGTDSVILIKCDERGMIPSDLERRILEAKQKGFVPLVSATAGTTVYGAFDPLLAVADICKKY
KIWMHVDAAWGGGLMSRKHKWKLSGVERANSVTWNPMMGVPLQCSALLVREEGLMQN
CNQMHASLYLFQQDKHYDLSYDTGDKALQCGRHVDVFKLWLMWRAKGTGFEAHVDKCLELA





EYLYNIIKNREGYEMVFDGKPKQHTNVCFWYIPPSLRTLEDNEERMSRLSKVAPVIKARMMMEYGT
TMVSYQPLGDKVNFVRMVISNPAATHQDIDFLIEEIERLGQDLSR

Formulation

Liquid in Phosphate buffer containing NaCl (1M), Na₂HPO₄ (10mM), KCl (2.7mM) and KH₂PO₄ (2.0mM) with protease inhibitor, pH8.0.

Storage

Store at -80°C. Avoid repeated freezing/thawing cycles.

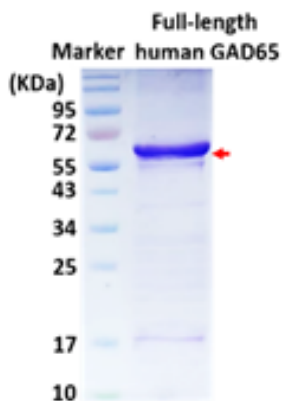
Quality Control Test

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

Elisa assay analysis to determine functionality of protein.

SDS-PAGE gel



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