



## Human Glutamic Acid Decarboxylase 65kDa Isoform (1-45 amino acid truncated GAD65)

<b>Origin:</b>	Recombinant	<b>Cat. No.:</b>	41846
<b>Tag:</b>	N-terminal 6xHis	<b>Size:</b>	0.1 mg
<b>Source:</b>	<i>Spodopterafrugiperda</i> Sf9	<b>Purity:</b>	>95%
<b>Species:</b>	Human	<b>Abbreviation</b>	GAD65(1-45tr)

### Description

Expressed in Baculovirus-sf9 vector expression system with total 566 amino acids (AA). Mw: 63.9kDa (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  $\beta$ -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  $\beta$ -cell exhaustion in these patients. Furthermore, GADA in non-diabetic individuals predicts the later development of type 1 diabetes<sup>1</sup>. 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

**MSYYHHHHHDYDIPTTENLYFQGA**ALLYGDAEKPAESGGSQPPRAAARKAACACDQKPC  
SCSKVDVNYAFLHATDLLPACDGERPTLAFLQDVMNILLQYVVKSFDRSTKVIDFHYPNELLQEY  
NWELADQPQNLEEILMHCQTTLKYAIKTGHPRYFNQLSTGLDMVGLAADWLTSTANTNMFTYEI  
APVFLLEYVTLKKMREIIGWPGGSGDGIFSPGGAISNMYAMMIARFKMFPEVKEKGMAALPRL  
IAFTSEHSHFSLKKGAAALGIGTDSVILIKCDERGKMIPSDLERRILEAKQKGFVPFLVSATAGTT  
VYGAFDPLLAVADICKKYKIWMHVDAAWGGLLMSRKHKWKLSGVERANSVTWNPHKMMGV  
PLQCSALLVREEGLMQNCNQMHASYLFQQDKHYDLSYDTGDKALQCGRHVDVFKLWLMWRA





KGTTGFEAHVDKCLELAELYLNIIKNREGYEMVFDGKQPQHTNVCFWYIPPSLRTLEDNEERMSR  
LSKVAPVIKARMMMEYGTTMVSQPLGDKVNFRRMVISNPAATHQDIDFLIEEIERLGQDL

## Formulation

Liquid in Phosphate buffer containing NaCl (1M), Na<sub>2</sub>HPO<sub>4</sub> (10mM), KCl (2.7mM) and KH<sub>2</sub>PO<sub>4</sub> (2.0mM) with protease inhibitor, pH8.0.

## Storage

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

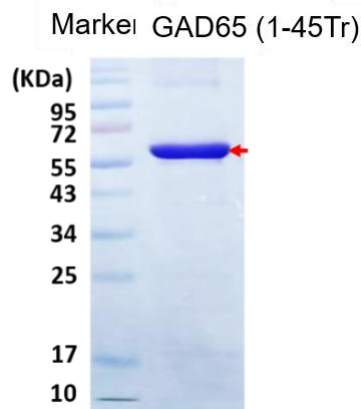
## Quality Control Test

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



## Contact Us

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