

GAD2/GAD65 Protein, Mouse (sf9)

Cat. No.:	HY-P75178
Synonyms:	Glutamate decarboxylase 2; GAD-65; GAD2
Species:	Mouse
Source:	Sf9 insect cells
Accession:	Q548L4 (N-G&P, M1-L585)
Gene ID:	14417
Molecular Weight:	Approximately 58 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 50 mM Tris, 100 mM NaCl, 10% Glycerol, 3 mM DTT, pH 8.0. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

Glutamate decarboxylase 2 (GAD2) is a key enzyme in neurotransmitter metabolism, specifically catalyzing the production of gamma-aminobutyric acid (GABA). GABA is a crucial inhibitory neurotransmitter in the central nervous system, playing a pivotal role in regulating neuronal excitability and maintaining the balance between excitation and inhibition in the brain. As the catalyst for GABA synthesis, GAD2 plays a fundamental role in modulating neurotransmission and influencing various physiological processes, highlighting its importance in the intricate network of neural signaling within the nervous system. Meanwhile, GAD2 also has glutamate binding activity, glutamate decarboxylase activity, and pyridoxal phosphate binding activity. GAD2 is expressed in several structures, including the genitourinary system, the gastrointestinal nervous system, and sensory organs. In addition, GAD2 can be used to study epilepsy and type 1 diabetes^[1].

Caution: Product has not been fully validated for medical applications. For research use only.

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