GAD1/2 ELISA Kit for Human, Mouse

PRODUCT OVERVIEW

Product Name	GAD1/2, ELISA Kit
Full Product Name	GAD1/2 Colorimetric Cell-Based ELISA Kit
Product Gene Name	GAD1/2 elisa kit
Product Synonym Gene Name	GAD1; GAD2
Product Synonym Names	Glutamate decarboxylase 2; Glutamate decarboxylase 65 kDa isoform; GAD-65; 65 kDa glutamic acid decarboxylase
Species Reactivity	Human, Mouse
Assay Type	Non-Phospho Cell-Based ELISA
Samples	Researchers plate their cell line of choice
Sensitivity	>=5000 cells/well
Form/Format	One 96-Well Plate
Preparation and Storage	Store at 4 degree C.
Molecular Weight	66897; 65411
OMIM	M81883 mRNA
3D Structure	ModBase 3D Structure for Q99259
Detection Method	Colorimetric 450 nm
Product Categories/Family for GAD1/2 elisa kit	Cell Based ELISA Kit
Related Product Information for GAD1/2 elisa kit	MBS9500245 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the GAD1/2, ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing GAD1/2. The ELISA analytical biochemical technique of the MBS9500245 kit is based on GAD1/2 antibody-GAD1/2 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect GAD1/2 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, GAD1/2. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).
Other Notes	Small volumes of GAD1/2 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for GAD1/2. It may not necessarily be applicable to this product.

NCBI GI #	58331246
NCBI GeneID	2571
NCBI Accession #	NP_000808.2
UniProt Primary Accession #	Q99259
UniProt Secondary Accession #	Q49AK1; Q53TQ7; Q9BU91; Q9UHH4

UniProt Related Accession #	Q99259
GenBank Nucleotide #	NM_000817.2
NCBI Official Full Name	glutamate decarboxylase 1 isoform GAD67
NCBI Official Synonym Full Names	glutamate decarboxylase 1
NCBI Official Symbol	GAD1
NCBI Official Synonym Symbols	GAD; SCP; CPSQ1
UniProt Protein Name	Glutamate decarboxylase 1
UniProt Synonym Protein Names	67 kDa glutamic acid decarboxylase; GAD-67; Glutamate decarboxylase 67 kDa isoform
UniProt Gene Name	GAD1
UniProt Synonym Gene Names	GAD; GAD67; GAD-67
NCBI Protein Information	glutamate decarboxylase 1
NCBI Summary for GAD1/2	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. [provided by RefSeq, Jul 2008]
UniProt Comments for GAD1/2	GAD67: Catalyzes the production of GABA. Homodimer. Isoform 3 is expressed in pancreatic islets, testis, adrenal cortex, and perhaps other endocrine tissues, but not in brain. Belongs to the group II decarboxylase family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Amino Acid Metabolism - alanine, aspartate and glutamate; Carbohydrate Metabolism - butanoate; EC 4.1.1.15; Lyase; Mitochondrial; Other Amino Acids Metabolism - beta-alanine; Other Amino Acids Metabolism - taurine and hypotaurine Chromosomal Location of Human Ortholog: 2q31.1 Cellular Component: axon; axon terminus; cell cortex; intracellular; mitochondrion; plasma membrane; presynaptic active zone; vesicle membrane Molecular Function: glutamate binding; glutamate decarboxylase activity; protein binding; protein heterodimerization activity; protein N-terminus binding; pyridoxal phosphate binding Biological Process: gamma-aminobutyric acid biosynthetic process; glutamate catabolic process; glutamate decarboxylation to succinate; neurotransmitter biosynthetic process; neurotransmitter secretion; protein-pyridoxal-5-phosphate linkage; response to drug; social behavior; synaptic transmission Disease: Cerebral Palsy, Spastic Quadriplegic, 1
Research Articles on GAD1/2	**1.** findings converge on variation in glutamic acid decarboxylase 1 gene predicting a susceptibility mechanism that affects white matter fractional anisotropy, GABAergic inhibitory neurotransmission in the dorsolateral prefrontal cortex, and working memory performance.
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