Datasheet for ABIN99811

anti-GLUD1 antibody

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Overview

Quantity:	2 mL
Target:	GLUD1
Reactivity:	Cow
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This GLUD1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunoprecipitation (IP)

Product Details

Purpose:	Glutamate Dehydrogenase Antibody
Immunogen:	Immunogen: This antibody was prepared from whole rabbit serum produced by repeated immunizations with a full length Glutamate Dehydrogenase protein isolated from Bovine Liver. Immunogen Type: Native Protein
Cross-Reactivity (Details):	Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-rabbit serum, purified and partially purified Glutamate Dehydrogenase [Bovine Liver].
Characteristics:	Synonyms: rabbit anti-Glutamate Dehydrogenase Antibody, Glutamate dehydrogenase 1 mitochondrial, GDH 1
Purification:	This product was prepared from monospecific antiserum by a delipidation and defibrination.

Target Details

Target:	GLUD1

Target Details

Alternative Name:	GLUD1 (GLUD1 Products)
Background:	Background: Glutamate is a major excitatory neurotransmitter. One enzyme central to the metabolism of glutamate is glutamate dehydrogenase (GDH1, EC 1.4.1.3), that catalyzes the reversible deamination of L-glutamate to 2-oxoglutarate using NAD+ or NADP+. Mammalian GDH is composed of six identical subunits, and the regulation of GDH is very complex. It has been a major goal to identify the substrate and regulatory binding sites of GDH. It is only in recent years that the three-dimensional structure of GDH from microorganisms is available. Very recently, crystallization of bovine liver GDH was reported for the first time from the mammalian sources. However, remarkably little is known about the detailed structure of mammalian GDH, especially the brain enzymes.
Gene ID:	281785, 32880221
UniProt:	P00366
Pathways:	Positive Regulation of Peptide Hormone Secretion, Warburg Effect

Application Details

Application Notes:	Application Note: This antibody has been tested by western blot. Specific conditions for reactivity should be optimized by the end user. Bovine glutamate dehydrogenase exists as a homohexamer located within the mitochondrial matrix. Expect a band approximately 56 kDa in size corresponding to glutamate dehydrogenase monomer subunit by western blotting in the appropriate cell or tissue extract. Anti-Glutamate Dehydrogenase Antibody is suitable for use in ELISA. Western Blot Dilution: 1:1,000 - 1:3,000 Immunoprecipitation Dilution: 1:100 ELISA Dilution: 1:4,000 - 1:16,000 Other: User Optimized
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Reconstitution Volume: 2.0 mL Reconstitution Buffer: Restore with deionized water (or equivalent)
Concentration:	85 mg/mL

Handling

Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: None Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiry Date:	12 months

Publications

Product cited in:	Pougovkina, te Brinke, Ofman, van Cruchten, Kulik, Wanders, Houten, de Boer: "Mitochondrial protein acetylation is driven by acetyl-CoA from fatty acid oxidation." in: **Human molecular genetics**, Vol. 23, Issue 13, pp. 3513-22, (2015) (PubMed). Frigerio, Karaca, De Roo, Mlynárik, Skytt, Carobbio, Pajęcka, Waagepetersen, Gruetter, Muller, Maechler: "Deletion of Glud1 (Glutamate Dehydrogenase 1) in the Central Nervous System affects glutamate handling without altering synaptic transmission." in: **Journal of neurochemistry**, (2012) (PubMed). Anthonio, Brees, Baumgart-Vogt, Hongu, Huybrechts, Van Dijck, Mannaerts, Kanaho, Van Veldhoven, Fransen: "Small G proteins in peroxisome biogenesis: the potential involvement of ADP-ribosylation factor 6." in: **BMC cell biology**, Vol. 10, pp. 58, (2009) (PubMed). Huybrechts, Van Veldhoven, Hoffman, Zeevaert, de Vos, Demaerel, Brams, Jaeken, Fransen, Cassiman: "Identification of a novel PEX14 mutation in Zellweger syndrome." in: **Journal of medical genetics**, Vol. 45, Issue 6, pp. 376-83, (2008) (PubMed). Korolainen, Goldsteins, Nyman, Alafuzoff, Koistinaho, Pirttilae: "Oxidative modification of proteins in the frontal cortex of Alzheimer's disease brain." in: **Neurobiology of aging**, Vol. 27, Issue 1, pp. 42-53, (2005) (PubMed).

Publications

There are more publications referencing this product on: Product page

Images

Western Blotting

Image 1. Western blot analysis is shown using anti-bovine glutamate dehydrogenase antibody to detect the enzyme from bovine liver preparations. Comparison to a molecular weight marker indicates a predominant band of ~62 kDa. The higher molecular weight band may represent a subunit dimer. A 4-20% gradient gel was used to separate proteins prior to transfer to 0.2 µm nitrocellulose. The blot was incubated with a 1:1,000 dilution of the antibody for 2 h at room temperature followed by detection using800 labeled Goat-a-Rabbit IgG [H&L] diluted 1:5,000 for 45 min at room temperature.800 fluorescence image was captured using the Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.