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

Product Details

Immunogen:	This antibody was prepared from whole rabbit serum produced by repeated immunizations with a full length Glutamate Dehydrogenase protein isolated from Bovine Liver. Immunogentype:Native
Characteristics:	Concentration Definition: by Refractometry

Target Details

Target:	GLUD1
Alternative Name:	Glutamate Dehydrogenase (GLUD1 Products)
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

Target Details

	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. Synonyms: Glutamate dehydrogenase 1, mitochondrial GDH 1 EC=1.4.1.3
Gene ID:	281785, 32880221
UniProt:	P00366
Pathways:	Positive Regulation of Peptide Hormone Secretion, Warburg Effect

Application Details

Application Notes:	This antibody has been tested for use in ELISA and 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.
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Restore with deionized water (or equivalent)
Concentration:	85 mg/mL
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
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

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).

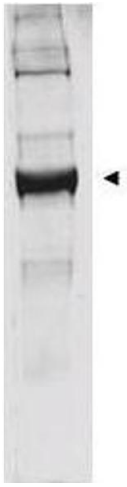
Anthonio, Brees, Baumgart-Vogt, Hongu, Huybrechts, Van Dijck, Mannaerts, Kanaho, Van Veldhoven, Fransen: "Small G proteins in peroxisome biogenesis: the potential involvement of ADP-ribosylation factor 6." in: **BMC cell biology**, Vol. 10, pp. 58, (2009) (PubMed).

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).

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.