

Product datasheet for R1086

GLUD1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, WB
Recommended Dilution:	This antibody has been tested for use in ELISA and by Western blot. Bovine glutamate dehydrogenase exists as a homohexamer located within the mitochondrial matrix. Expect a band approximately 62 kDa in size corresponding to glutamate dehydrogenase monomer subunit by Western blotting in the appropriate cell or tissue extract. <u>Recommended Dilutions:</u> ELISA: 1/4,000-1/16,000 Western blot: 1/1,000-1/3,000.
Reactivity:	Bovine
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	A full length Glutamate Dehydrogenase protein isolated from Bovine Liver.
Specificity:	Assay by immunoelectrophoresis resulted in a single precipitin arc against purified and partially purified Glutamate Dehydrogenase [Bovine Liver]. BLAST analysis was used to determine that cross reactivity is suggested for both mitochondrial and brain isoforms (GDH1 and GDH2), from both bovine and human sources. Additionally similar reactivity is suggested for most primate species including green monkey, white gibbon, chimpanzee orangutan, and gorilla. A high degree of sequence homology is also noted for GDH from chicken, mouse, rat, dog, and other mammals as well as Xenopus tropicalis, zebrafish, rainbow trout and Atlantic salmon. Cross reactivity against Glutamate Dehydrogenase from other tissues and species may occur but have not been specifically determined.
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 with 0.01% (w/v) Sodium Azide as preservative. State: Serum State: Lyophilized purified Ig fraction.
Reconstitution Method:	Restore with 2.0 ml of deionized water (or equivalent).
Concentration:	lot specific
Purification:	Delipidation and defibrination.



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Conjugation:	Unconjugated
Storage:	<p>Store vial at 2-8°C prior to restoration. Centrifuge product if not completely clear after standing at room temperature. This product is stable for one month at 2-8°C as an undiluted liquid.</p> <p>For extended storage reconstitute product with 50% glycerol instead of water and then aliquot contents and freeze at -20°C or below.</p> <p>Dilute only prior to immediate use.</p> <p>Avoid cycles of freezing and thawing.</p>
Stability:	Shelf life: one year from despatch.
Database Link:	P00367
Background:	<p>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.</p>
Synonyms:	GLUD1, GLUD, GDH1
Note:	<p>Protein sequence: Bovine GDH, 558 aa, predicted MW 61.5 kDa</p> <p>1 myrylgeall lsragspaalg sasadsaall gwargqpaaa pppglvppar rhyseaaadr 61 eddpnffkmv egffdrqasi vedklvedlk treteeqkrn rvrsilriik pcnhvlslf 121 pirrddgswe viegyraqhs qhrtpckggi rystdvsde vkalaslmtv kcavvdvpfg 181 gakagvkinp knytdnelek itrftmela kkgfigpgvd vpapdmstge remswiadty 241 astighyidin ahacvtgkpi sqgghgrs atgrgvfghi enfineasym silgmtppfg 301 dktfvvqgfg nvglhsmryl hrfgakciav gesdgsiwnp dgidpkeled fklqhgtilg 361 fpkakiyegs ilevdc dili paasekqlpk snaprvkaki iaegangptt peadkifler 421 nimvipdlyl naggvtvsyf ewlnnlhvs ygrlftkyer dsnyhlmsv qeslerkfgk 481 hggtipivpt aefqdrisga sekdivhsgl aytmersarq imrtamkynl gdlrtaayv 541 naiekvfrvy neagvtft</p>

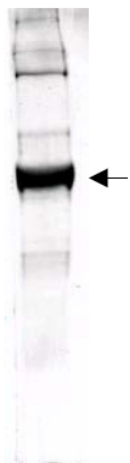
Product images:

Figure 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 μ m nitrocellulose. The blot was incubated with a 1:1,000 dilution of the antibody for 2 h at room temperature followed by detection using IRDye (TM) 800 labeled Goat-a-Rabbit IgG [H&L] diluted 1:5,000 for 45 min at room temperature. IRDye (TM) 800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.