

Glutamate Dehydrogenase 1/2 Antibody



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	52	Rabbit	#P00367	2746

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Glutamate Dehydrogenase 1/2 Antibody recognizes endogenous levels of total glutamate dehydrogenase 1 and 2 proteins.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asn339 of human glutamate dehydrogenase 1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Glutamate dehydrogenase is a mitochondrial enzyme that catalyzes the oxidative deamination of glutamate to α-ketoglutarate through association with the cofactor nicotinamide adenine dinucleotide phosphate (1). Glutamate dehydrogenase is highly expressed in various tissues such as the liver, brain, kidney, heart, pancreas, ovaries, and testis. Two isoforms produced by two distinct genes are found in mammalian tissues. The *GLUD1* gene is ubiquitously expressed (2), while the *GLUD2* gene is specifically expressed in testicular tissues and astrocytes (3,4). Glutamate dehydrogenase links glutamate to the Krebs cycle, thereby playing a critical role in the regulation of energy homeostasis. Research studies have shown that changes in glutamate dehydrogenase activity in pancreatic β-cells can cause a hyperinsulinism syndrome (5).

Background References

1. Blumenthal, K.M. et al. (1975) *J Biol Chem* 250, 3644-54.
2. Michaelidis, T.M. et al. (1993) *Genomics* 16, 150-60.
3. Shashidharan, P. et al. (1997) *J Neurochem* 68, 1804-11.
4. Zaganas, I. et al. (2012) *Neurochem Int* 61, 455-62.
5. Karaca, M. et al. (2011) *Neurochem Int* 59, 510-7.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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