

GLDC Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	113	Rabbit	#P23378	2731

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

GLDC Antibody recognizes endogenous levels of total GLDC protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val668 of human GLDC protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Glycine decarboxylase (GLDC) is a component of a mitochondrial protein complex that catalyzes the degradation of glycine (1). The glycine cleavage system is composed of three distinct enzymes (P-, T- and L-proteins) and an additional component (H-protein) that transfers a glycine methylamine group from one enzyme to another. The GLDC protein (P-protein) is the decarboxylase that binds the methylamine group for transfer to the T-protein (2). Tumor-initiating cells in the primary non-small cell lung cancer (NSCLC) express high levels of GLDC and LIN28B, both of which are essential for the proliferation of tumor-initiating cells (3). GLDC is an oncogene that promotes tumorigenesis through its metabolic activity (3). Mutations in the corresponding GLDC gene account for the majority of reported cases of glycine encephalopathy, which is a metabolic disorder characterized by the accumulation of glycine, lethargy, hypotonia, intractable seizures, and death (2).

Background References

1. Kume, A. et al. (1991) *J Biol Chem* 266, 3323-9.
2. Kanno, J. et al. (2007) *J Med Genet* 44, e69.
3. Zhang, W.C. et al. (2012) *Cell* 148, 259-72.

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 BSA, 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 **Mk:** Monkey

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