

# GLDC Antibody

✓ 100 µl  
 (10 western blots)



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**For Research Use Only. Not For Use In Diagnostic Procedures.**

Entrez Gene ID #2731  
 UniProt ID #P23378

**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.

**\*Species cross-reactivity is determined by western blot.**

**\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.**

## Recommended Antibody Dilutions:

Western blotting 1:1000

**For product specific protocols please see the web page for this product at [www.cellsignaling.com](http://www.cellsignaling.com).**

**Please visit [www.cellsignaling.com](http://www.cellsignaling.com) for a complete listing of recommended complementary products.**

Applications W Endogenous	Species Cross-Reactivity* H, M, R, Mk	Molecular Wt. 113 kDa	Source Rabbit**
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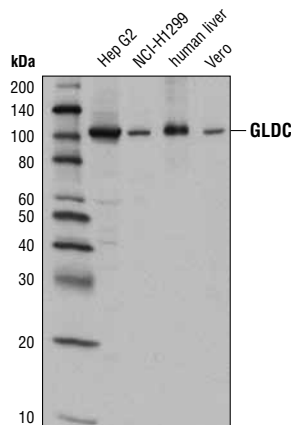
**Background:** Glycine decarboxylase (GLDC) is a component of a mitochondrial protein complex that catalyzes the degradation of glycine (1). The glycine cleavage system is composed of three distinct enzymes (P-, T- and L-proteins) and an additional component (H-protein) that transfers a glycine methylamine 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).

**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.

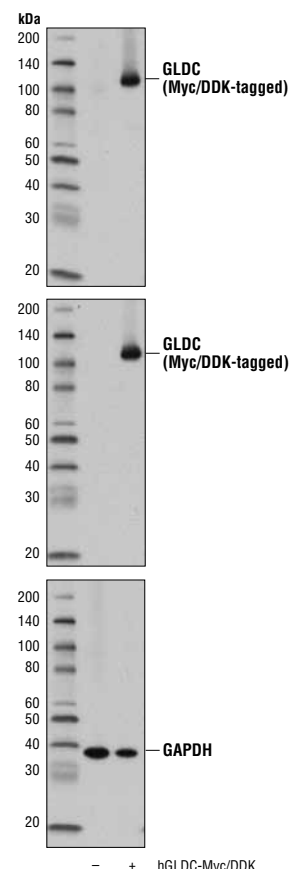
## Background References:

- (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.



Western blot analysis of extracts from various tissues and cell lines using GLDC Antibody.

Western blot analysis of extracts from 293 cells, mock transfected (-) or transfected with a construct expressing Myc/DDK-tagged full-length human GLDC (hGLDC-Myc/DDK; +), using GLDC Antibody (upper), Myc-Tag (71D10) Rabbit mAb #2278 (middle), or GAPDH (D16H11) XP® Rabbit mAb #5174 (lower).



**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.