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GLDC Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9495A

Product Information

Application	WB, E
Primary Accession	P23378
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB23981
Calculated MW	112730
Antigen Region	49-77

Additional Information

Gene ID	2731
Other Names	Glycine dehydrogenase (decarboxylating), mitochondrial, Glycine cleavage system P protein, Glycine decarboxylase, Glycine dehydrogenase (aminomethyl-transferring), GLDC, GCSP
Target/Specificity	This GLDC antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 49-77 amino acids from the N-terminal region of human GLDC.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GLDC Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GLDC (HGNC:4313)
Function	The glycine cleavage system catalyzes the degradation of glycine. The P protein (GLDC) binds the alpha-amino group of glycine through its pyridoxal phosphate cofactor; CO(2) is released and the remaining methylamine moiety

is then transferred to the lipoamide cofactor of the H protein (GCSH).

Cellular Location Mitochondrion.

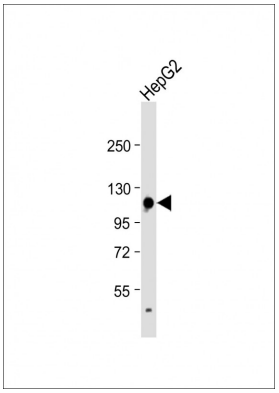
Background

Degradation of glycine is brought about by the glycine cleavage system, which is composed of four mitochondrial protein components: P protein (a pyridoxal phosphate-dependent glycine decarboxylase), H protein (a lipoic acid-containing protein), T protein (a tetrahydrofolate-requiring enzyme), and L protein (a lipoamide dehydrogenase). The protein is the P protein, which binds to glycine and enables the methylamine group from glycine to be transferred to the T protein. Defects in this gene are a cause of nonketotic hyperglycinemia (NKH).

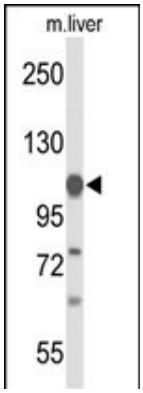
References

Chang, C.Y., et al. Acta Paediatr Taiwan 49(1):35-37(2008)
Kanno, J., et al. J. Med. Genet. 44 (3), E69 (2007)
Kure, S., et al. Hum. Mutat. 27(4):343-352(2006)

Images



Anti-GLDC Antibody (N-term) at 1:1000 dilution + HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 113 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot analysis of GLDC Antibody (N-term) (Cat. #AP9495a) in mouse liver tissue lysates (35ug/lane). GLDC (arrow) was detected using the purified Pab.

Citations

- Obesity increases hepatic glycine dehydrogenase and aminomethyltransferase expression while dietary glycine supplementation reduces white adipose tissue in Zucker diabetic fatty rats