

# DLDD/Lipoamide Dehydrogenase Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP57025

## Product Information

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<b>Application</b>	WB, IHC-P, IHC-F, IF, ICC, E
<b>Primary Accession</b>	<a href="#">P09622</a>
<b>Reactivity</b>	Rat, Dog, Bovine
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	54177
<b>Physical State</b>	Liquid
<b>Immunogen</b>	KLH conjugated synthetic peptide derived from human Lipoamide Dehydrogenase
<b>Epitope Specificity</b>	241-340/509
<b>Isotype</b>	IgG
<b>Purity</b>	affinity purified by Protein A
<b>Buffer</b>	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
<b>SUBCELLULAR LOCATION</b>	Mitochondrion matrix.
<b>SIMILARITY</b>	Belongs to the class-I pyridine nucleotide-disulfide oxidoreductase family.
<b>Post-translational modifications</b>	Tyrosine phosphorylated.
<b>DISEASE</b>	Note=Defects in DLD are involved in the development of congenital infantile lactic acidosis. Defects in DLD are a cause of maple syrup urine disease (MSUD) [MIM:248600]. MSUD is characterized by mental and physical retardation, feeding problems and a maple syrup odor to the urine. The keto acids of the branched-chain amino acids are present in the urine, resulting from a block in oxidative decarboxylation.
<b>Important Note</b>	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
<b>Background Descriptions</b>	This gene encodes a member of the class-I pyridine nucleotide-disulfide oxidoreductase family. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. In homodimeric form, the encoded protein functions as a dehydrogenase and is found in several multi-enzyme complexes that regulate energy metabolism. However, as a monomer, this protein can function as a protease. Mutations in this gene have been identified in patients with E3-deficient maple syrup urine disease and lipoamide dehydrogenase deficiency. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2014]

## Additional Information

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<b>Gene ID</b>	1738
<b>Other Names</b>	Dihydrolipoyl dehydrogenase, mitochondrial, 1.8.1.4, Dihydrolipoamide

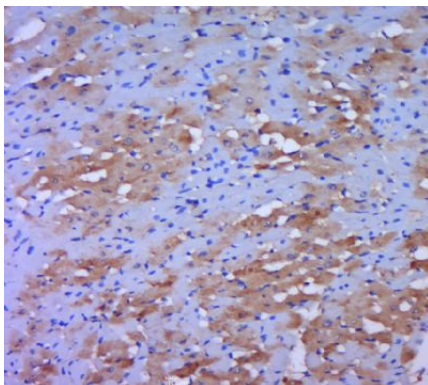
dehydrogenase, Glycine cleavage system L protein, DLD, GCSL, LAD, PHE3

<b>Dilution</b>	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
<b>Format</b>	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
<b>Storage</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

## Protein Information

<b>Name</b>	DLD
<b>Synonyms</b>	GCSL, LAD, PHE3
<b>Function</b>	Lipoamide dehydrogenase is a component of the glycine cleavage system as well as an E3 component of three alpha-ketoacid dehydrogenase complexes (pyruvate-, alpha-ketoglutarate-, and branched- chain amino acid-dehydrogenase complex) (PubMed: <a href="#">15712224</a> , PubMed: <a href="#">16442803</a> , PubMed: <a href="#">16770810</a> , PubMed: <a href="#">17404228</a> , PubMed: <a href="#">20160912</a> , PubMed: <a href="#">20385101</a> ). The 2-oxoglutarate dehydrogenase complex is mainly active in the mitochondrion (PubMed: <a href="#">29211711</a> ). A fraction of the 2-oxoglutarate dehydrogenase complex also localizes in the nucleus and is required for lysine succinylation of histones: associates with KAT2A on chromatin and provides succinyl-CoA to histone succinyltransferase KAT2A (PubMed: <a href="#">29211711</a> ). In monomeric form may have additional moonlighting function as serine protease (PubMed: <a href="#">17404228</a> ). Involved in the hyperactivation of spermatazoa during capacitation and in the spermatazoal acrosome reaction (By similarity).
<b>Cellular Location</b>	Mitochondrion matrix. Nucleus. Cell projection, cilium, flagellum {ECO:0000250 UniProtKB:Q811C4}. Cytoplasmic vesicle, secretory vesicle, acrosome. Note=Mainly localizes in the mitochondrion. A small fraction localizes to the nucleus, where the 2- oxoglutarate dehydrogenase complex is required for histone succinylation.

## Images



Paraformaldehyde-fixed, paraffin embedded (rat heart tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (DLDD) Polyclonal Antibody, Unconjugated (AP57025) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.