

**Anti-DLD Antibody**  
**Catalog # ABO10782****Specification**

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**Anti-DLD Antibody - Product Information**

Application	WB, IHC, ICC
Primary Accession	<a href="#">P09622</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Dihydrolipoyl dehydrogenase, mitochondrial(DLD) detection. Tested with WB, IHC-P; IHC-F; ICC in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-DLD Antibody - Additional Information**

**Gene ID** 1738

**Other Names**

Dihydrolipoyl dehydrogenase, mitochondrial, 1.8.1.4, Dihydrolipoamide dehydrogenase, Glycine cleavage system L protein, DLD, GCSL, LAD, PHE3

**Calculated MW**

54177 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat<br> <br>Immunocytochemistry , 0.5-1 µg/ml, Human, -<br>Immunohistochemistry(Frozen Section), 0.5-1 µg/ml, Rat, Mouse<br>Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse<br>

**Subcellular Localization**

Mitochondrion matrix.

**Protein Name**

Dihydrolipoyl dehydrogenase, mitochondrial

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of human DLD(492-509aa EAFREANLAASFGKSINF), different from the related mouse and rat sequences by one amino acid.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

**Storage**

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Sequence Similarities**

Belongs to the class-I pyridine nucleotide-disulfide oxidoreductase family.

**Anti-DLD Antibody - Protein Information**

**Name** DLD

**Synonyms** GCSL, LAD, PHE3

**Function**

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="http://www.uniprot.org/citations/15712224" target="\_blank">15712224</a>, PubMed: <a href="http://www.uniprot.org/citations/16442803" target="\_blank">16442803</a>, PubMed: <a href="http://www.uniprot.org/citations/16770810" target="\_blank">16770810</a>, PubMed: <a href="http://www.uniprot.org/citations/17404228" target="\_blank">17404228</a>, PubMed: <a href="http://www.uniprot.org/citations/20160912" target="\_blank">20160912</a>, PubMed: <a href="http://www.uniprot.org/citations/20385101" target="\_blank">20385101</a>). The 2-oxoglutarate dehydrogenase complex is mainly active in the mitochondrion (PubMed: <a href="http://www.uniprot.org/citations/29211711" target="\_blank">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="http://www.uniprot.org/citations/29211711" target="\_blank">29211711</a>). In monomeric form may have additional moonlighting function as serine protease (PubMed: <a href="http://www.uniprot.org/citations/17404228" target="\_blank">17404228</a>). Involved in the hyperactivation of spermatazoa during capacitation and in the spermatazoal acrosome reaction (By similarity).

**Cellular Location**

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.

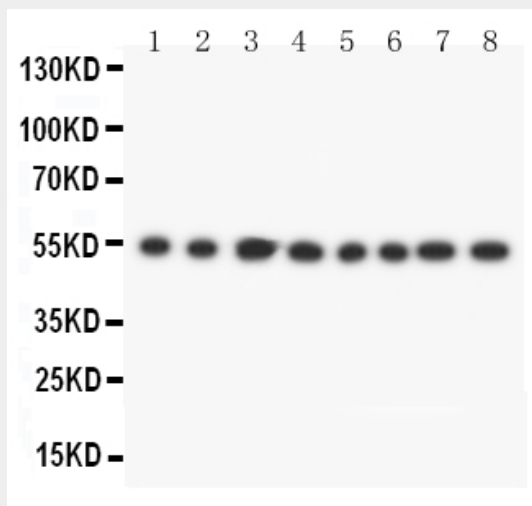
**Anti-DLD Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

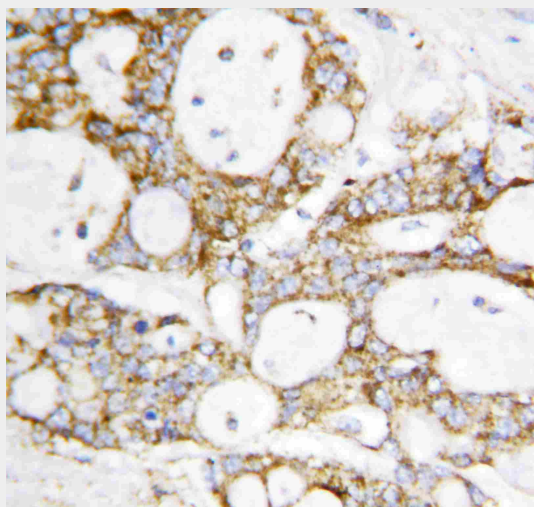
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

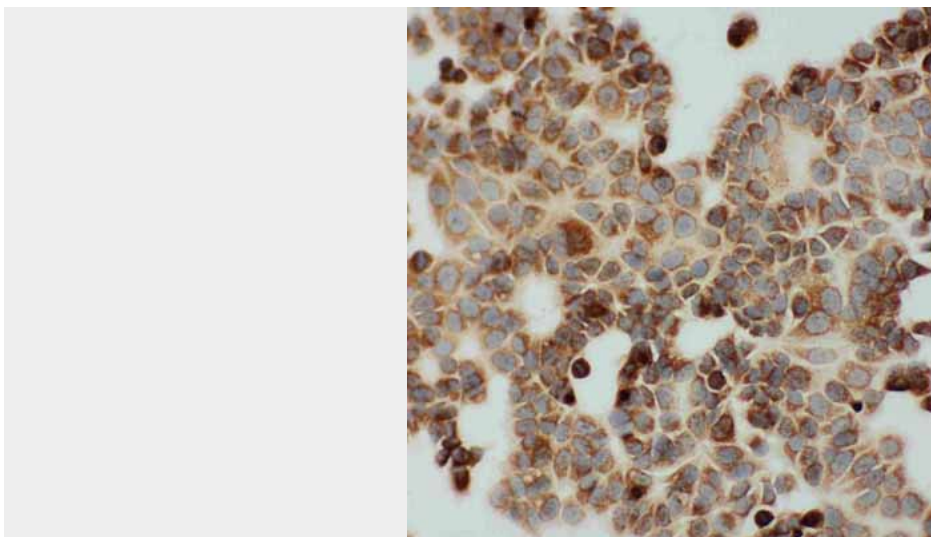
## Anti-DLD Antibody - Images



Anti-DLD antibody, ABO10782, Western blotting  
 Lane 1: Rat Liver Tissue Lysate  
 Lane 2: Rat Brain Tissue Lysate  
 Lane 3: Rat Ovary Tissue Lysate  
 Lane 4: Rat Testis Tissue Lysate  
 Lane 5: SMMC Cell Lysate  
 Lane 6: HELA Cell Lysate  
 Lane 7: SMMC Cell Lysate  
 Lane 8: JURKAT Cell Lysate



Anti-DLD antibody, ABO10782, IHC(P)  
 IHC(P): Human Mammary Cancer Tissue



Anti-Lipoamide Dehydrogenase antibody, ABO10782, ICCICC: MCF-7 Cell

### **Anti-DLD Antibody - Background**

DLD, Dihydrolipoamide dehydrogenase, is a component of the pyruvate dehydrogenase complex, the alpha-ketoglutarate dehydrogenase complex, and the branched-chain alpha-keto acid dehydrogenase complex (BCKD). DLD is a flavoprotein enzyme that degrades lipoamide, and produces dihydrolipoamide. The DLD gene contains 14 exons. The gene is localized to 7q31-q32. This gene encodes the L protein of the mitochondrial glycine cleavage system. The L protein, also named dihydrolipoamide dehydrogenase, is also a component of the pyruvate dehydrogenase complex, the alpha-ketoglutarate dehydrogenase complex, and the branched-chain alpha-keto acid dehydrogenase complex.