

DLD / Diaphorase / E3 Antibody (clone 3C1)
Mouse Monoclonal Antibody
Catalog # ALS14363**Specification**

DLD / Diaphorase / E3 Antibody (clone 3C1) - Product Information

Application	WB, IHC
Primary Accession	P09622
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	54kDa KDa

DLD / Diaphorase / E3 Antibody (clone 3C1) - 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

Target/Specificity

Human DLD

Reconstitution & Storage

Aliquot and store at -20°C or -80°C. Avoid freeze-thaw cycles.

Precautions

DLD / Diaphorase / E3 Antibody (clone 3C1) is for research use only and not for use in diagnostic or therapeutic procedures.

DLD / Diaphorase / E3 Antibody (clone 3C1) - 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:15712224, PubMed:16442803, PubMed:16770810, PubMed:17404228, PubMed:20160912, PubMed:20385101). The 2-oxoglutarate dehydrogenase complex is mainly active in the mitochondrion (PubMed:<a

<http://www.uniprot.org/citations/29211711> target="_blank">29211711). 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:29211711). In monomeric form may have additional moonlighting function as serine protease (PubMed:17404228). 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.

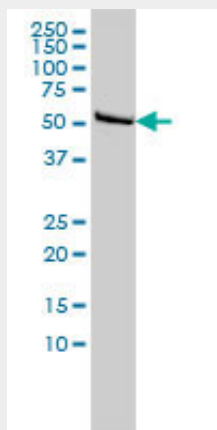
Note=Mainly localizes in the mitochondrion. A small fraction localizes to the nucleus, where the 2-oxoglutarate dehydrogenase complex is required for histone succinylation.

DLD / Diaphorase / E3 Antibody (clone 3C1) - Protocols

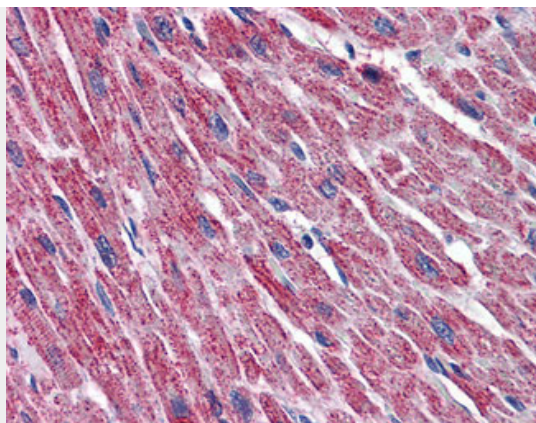
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

DLD / Diaphorase / E3 Antibody (clone 3C1) - Images



Western blot of DLD expression in HeLa cell lysate.



Anti-DLD / DLDH antibody IHC of human heart.

DLD / Diaphorase / E3 Antibody (clone 3C1) - Background

Lipoamide dehydrogenase is a component of the glycine cleavage system as well as of the alpha-ketoacid dehydrogenase complexes. Involved in the hyperactivation of spermatazoa during capacitation and in the spermatazoal acrosome reaction.

DLD / Diaphorase / E3 Antibody (clone 3C1) - References

Otulakowski G.,et al.J. Biol. Chem. 262:17313-17318(1987).
Pons G.,et al.Proc. Natl. Acad. Sci. U.S.A. 85:1422-1426(1988).
Feigenbaum A.S.,et al.Genomics 17:376-381(1993).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Totoki Y.,et al.Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases.