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Lipoamide Dehydrogenase Rabbit mAb

Catalog # AP74870

Product Information

Application	WB, IHC-P, IHC-F
Primary Accession	P09622
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	54177

Additional Information

Gene ID	1738
Other Names	DLD
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A IHC-F~~N/A
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	DLD (HGNC:2898)
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: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). The pyruvate dehydrogenase (PDH) complex catalyzes the overall conversion of pyruvate to acetyl-CoA and CO(2), and thereby links cytoplasmic glycolysis and the mitochondrial tricarboxylic acid (TCA) cycle (Probable). It contains multiple copies of three enzymatic components: pyruvate dehydrogenase (E1), dihydrolipoamide acetyltransferase (E2) and dihydrolipoamide dehydrogenase (E3) (Probable). The E3 subunit catalyzes reoxidation of the dihydrolipoyl moiety on lipoyl-bearing domains (LBDs) of E2 with NAD+ as the ultimate electron acceptor (PubMed:16442803, PubMed:16770810, PubMed:20160912, PubMed:20385101).

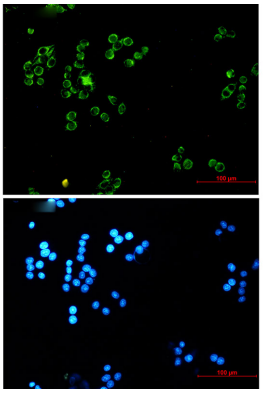
Cellular Location

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.

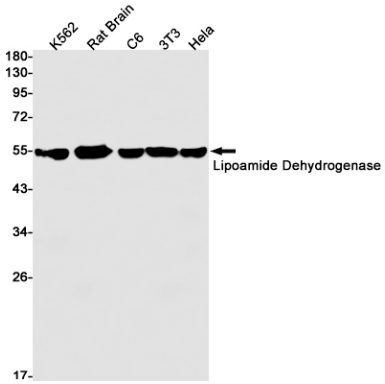
Background

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.

Images

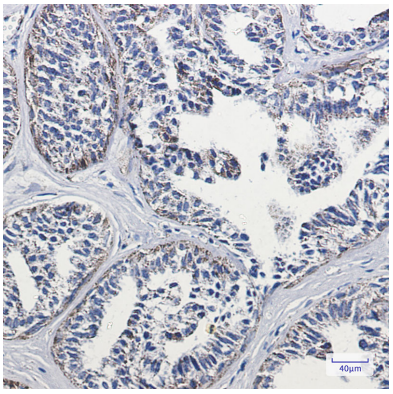


Immunocytochemistry analysis of Lipoamide Dehydrogenase (green) in Hela using Lipoamide Dehydrogenase antibody,and DAPI(blue).



Western blot analysis of Lipoamide Dehydrogenase in K562, rat Brain, C6, 3T3, Hela lysates using Lipoamide Dehydrogenase antibody.

Immunohistochemistry analysis of paraffin-embedded Human breast cancer tissue using Lipoamide Dehydrogenase antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.



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