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DLDH Antibody

Rabbit mAb
Catalog # AP92487

Product Information

Application	WB, IHC, IF, ICC, IHF
Primary Accession	P09622
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	Diaphorase; Dihydrolipoamide dehydrogenase; DLDD; DLDH; GCSL; LAD; lipoamide dehydrogenase; Lipoamide reductase; Lipoyl dehydrogenase; PHE3;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	54177

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human DLDH
Description	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.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

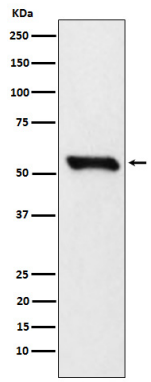
Name	DLD (HGNC:2898)
Synonyms	GCSL, LAD, PHE3
Function	Lipoamide dehydrogenase is a component of the glycine cleavage system as well as an E3 component of three alpha-ketoacid dehydrogenase complexes (pyruvate-, alpha-ketoglutarate-, and branched- chain amino acid-dehydrogenase complex) (PubMed:15712224, 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.

Images



Western blot analysis of DLDH expression in 293T cell lysate.

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