DLAT Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	DLAT, Polyclonal Antibody
Full Product Name	DLAT Conjugated Antibody
Product Gene Name	anti-DLAT antibody
Product Synonym Names	DLTA; PDCE2; PDC-E2
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human
Form/Format	0.01M Sodium Phosphate, 0.25M NaCl, pH 7.6, 5mg/ml Bovine Serum Albumin, 0.02% Sodium Azide
Specificity	The antibody detects endogenous levels of total DLAT protein.
Preparation and Storage	Store at 4 degree C for 6 months.
Molecular Weight	68,997 Da
OMIM	245348
3D Structure	ModBase 3D Structure for P10515
Immunogen	Fusion protein of human DLAT
Conjugation	Biotin AF350 AF405 AF488 AF555 AF594 AF647 AF680 AF750
Excitation Emission	AF350: 346nm/442nm
Applications Tested/Suitable for anti-DLAT antibody	Most Applications
Application Notes for anti-DLAT antibody	Suggested Dilution: AF350 conjugated: most applications: 1:50-1:250 AF405 conjugated: most applications: 1:50-1:250 AF488 conjugated: most applications: 1:50-1:250 AF555 conjugated: most applications: 1:50-1:250 AF594 conjugated: most applications: 1:50-1:250 AF647 conjugated: most applications: 1:50-1:250 AF680 conjugated: most applications: 1:50-1:250 AF750 conjugated: most applications: 1:50-1:250 Biotin conjugated: working with enzyme-conjugated streptavidin, most applications: 1:50-1:1000
Related Product Information for anti-DLAT antibody	This gene encodes component E2 of the multi-enzyme pyruvate dehydrogenase complex (PDC). PDC resides in the inner mitochondrial membrane and catalyzes the conversion of pyruvate to acetyl coenzyme A. The protein product of this gene, dihydrolipoamide acetyltransferase, accepts acetyl groups formed by the oxidative decarboxylation of pyruvate and transfers them to coenzyme A. Dihydrolipoamide acetyltransferase is the antigen for antimitochondrial antibodies. These autoantibodies are present in nearly 95% of patients with the autoimmune liver disease primary biliary cirrhosis (PBC). In PBC, activated T lymphocytes attack and destroy epithelial cells in the bile duct where this protein is abnormally distributed and overexpressed. PBC enventually leads to cirrhosis and liver failure. Mutations in this gene are also a cause of pyruvate dehydrogenase E2 deficiency which causes primary lactic acidosis in infancy and early childhood.
Other Notes	Small volumes of anti-DLAT antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

Searchable Terms for DLAT purchase	MBS9451156 is an antibody targeting DLAT. Also known as DLAT Conjugated Antibody. Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for DLAT. It may not necessarily be applicable to this product.

NCBI GI #	25058599
NCBI GeneID	1737
NCBI Accession #	BC039084
UniProt Primary Accession #	P10515
UniProt Secondary Accession #	Q16783; Q53EP3
UniProt Related Accession #	P10515
NCBI Official Full Name	Homo sapiens dihydrolipoamide S-acetyltransferase, mRNA
NCBI Official Synonym Full Names	dihydrolipoamide S-acetyltransferase
NCBI Official Symbol	DLAT
NCBI Official Synonym Symbols	DLTA; PDCE2; PDC-E2
UniProt Protein Name	Dihydrolipoyllysine-residue acetyltransferase component of pyruvate dehydrogenase complex, mitochondrial
UniProt Synonym Protein Names	70 kDa mitochondrial autoantigen of primary biliary cirrhosis; PBC; Dihydrolipoamide acetyltransferase component of pyruvate dehydrogenase complex; M2 antigen complex 70 kDa subunit; Pyruvate dehydrogenase complex component E2; PDC-E2; PDCE2
Protein Family	Dihydrolipoyllysine-residue acetyltransferase component of pyruvate dehydrogenase complex
UniProt Gene Name	DLAT
UniProt Synonym Gene Names	DLTA; PBC; PDC-E2; PDCE2
UniProt Entry Name	ODP2_HUMAN
NCBI Protein Information	dihydrolipoyllysine-residue acetyltransferase component of pyruvate dehydrogenase complex, mitochondrial
UniProt Comments for DLAT	DLAT: the E2 component of the pyruvate dehydrogenase complex (PDHC) that catalyzes the overall conversion of pyruvate to acetyl-CoA and CO2. Contains two lipoyl-binding domains. The PDHC plays a major role in controlling the balance between lipid and glucose oxidation depending on substrate availability. The activity of the PDHC is tightly regulated by phosphorylation of the E1 components by the PDHKs. The pyruvate dehydrogenase (PDH) holoenzyme is a multi-enzyme complex (PDHC) that contains 20-30 copies of pyruvate decarboxylase tetramers (2 alpha:2 beta)(E1), 60 copies of dihydrolipoamide acetyltransferase (E2), six homo-dimers of dihydrolipoamide dehydrogenase (E3), plus E3 binding proteins. PDHKs are recruited to the PDHC by binding to a lipoyl group covalently attached to K174 of the inner lipoyl domain of the E2 component. Protein type: Carbohydrate Metabolism - pyruvate; Carbohydrate Metabolism - glycolysis and gluconeogenesis; EC 2.3.1.12; Transferase; Carbohydrate Metabolism - citrate (TCA) cycle; Mitochondrial Chromosomal Location of Human Ortholog: 11q23.1 Cellular Component: mitochondrion; mitochondrial matrix; mitochondrial pyruvate dehydrogenase complex Molecular Function: dihydrolipoyllysine-residue acetyltransferase activity; protein binding Biological Process: cellular metabolic process; tricarboxylic acid cycle; glucose metabolic process; regulation of acetyl-CoA biosynthetic process from pyruvate; pyruvate metabolic process Disease: Pyruvate Dehydrogenase E2 Deficiency
Research Articles on DLAT	**1.** ongoing activation of PDCE2-specific B-cells in primary biliary cirrhosis

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