

Product Name: KD-Validated DLAT Recombinant Rabbit Monoclonal Antibody**Catalog #: KVA00202**

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC,IHC-P
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 69.0kDa

Antigen Information

Gene Name	DLAT DLAT; Dihydrolipoamide S-Acetyltransferase; PDC-E2; DLTA; E2; Dihydrolipoyllysine-Residue Acetyltransferase Component Of Pyruvate; Dehydrogenase Complex, Mitochondrial; Dihydrolipoamide Acetyltransferase Component Of Pyruvate Dehydrogenase Complex; 70
Alternative Names	KDa Mitochondrial Autoantigen Of Primary Biliary Cirrhosis; E2 Component Of Pyruvate Dehydrogenase Complex; Pyruvate Dehydrogenase Complex Component E2; M2 Antigen Complex 70 KDa Subunit; EC 2.3.1.12; PDCE2; PBC; Dihydrolipoyllysine-Residue Acetyltransferase; EC 2.3.1
Gene ID	1737.0
SwissProt ID	P10515
Immunogen	A synthesized peptide derived from human DLAT

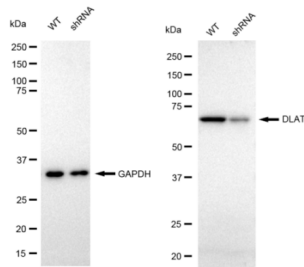
Background

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 eventually 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.[provided by RefSeq, Oct 2009]

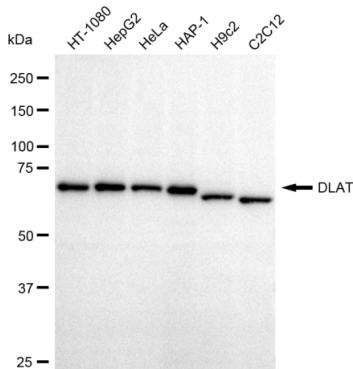
Research Area

Signal Transduction,Cancer,Metabolism

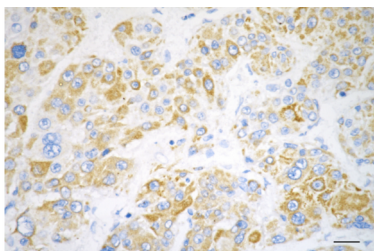
Image Data



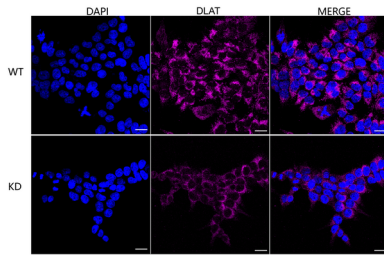
Western blotting analysis using DLAT antibody (KVA00202). DLAT expression in wild type (WT) and DLAT shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. GAPDH serves as a loading control. The blot was incubated with DLAT antibody (KVA00202, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



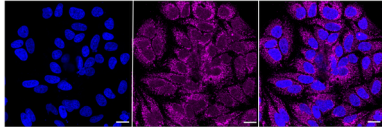
Western blotting analysis using DLAT antibody (KVA00202). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with DLAT antibody (KVA00202, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



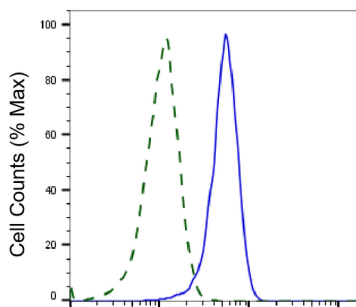
Immunohistochemistry was performed on paraffin-embedded human hepatocarcinoma using DLAT antibody (KVA00202, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.



Immunocytochemical staining of HeLa cells using DLAT antibody (KVA00202, 1:1,000), Top panel: wild-type (WT); Bottom panel: DLAT shRNA knockdown (KD). Nuclei were stained blue with DAPI; DLAT was stained magenta with Alexa Fluor® 647. Scale bar, 20 μm. Permeabilization: Triton.

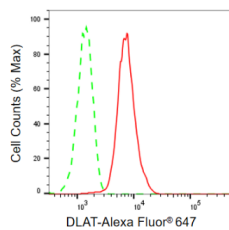


Immunocytochemical staining of HepG2 cells with DLAT antibody (KVA00202, 1:1,000). Nuclei were stained blue with DAPI; DLAT was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 μm.



Validation of DLAT knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with DLAT antibody (KVA00202, 1:2,000) and analyzed using CytoFLEX.

DLAT-Alexa Fluor® 647



Flow cytometric analysis of DLAT expression in HepG2 cells using DLAT antibody (KVA00202, 1:2,000). Green, isotype control; red, DLAT.