abcam

Product datasheet

Anti-PDHA1 antibody [EPR11099] ab155096

KO VALIDATED Recombinant RabMAb

6 References 6 Images

Overview

Product name	Anti-PDHA1 antibody [EPR11099]
Description	Rabbit monoclonal [EPR11099] to PDHA1
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat
Immunogen	Synthetic peptide within Human PDHA1 aa 350 to the C-terminus. The exact sequence is proprietary. Database link: **P08559**
Positive control	HepG2, 293T, HeLa, and Jurkat whole cell lysate (**ab7899**); Human thyroid carcinoma tissue; HeLa cells.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20ºC.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
Purity	Tissue culture supernatant
Clonality	Monoclonal

Clone number	EPR11099
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab155096 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/1000 - 1/10000. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		1/1000 - 1/2000. Predicted molecular weight: 43 kDa.
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
ICC/IF		1/250 - 1/500.

Target

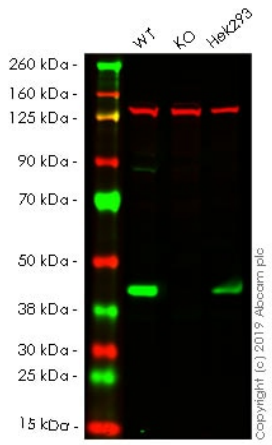
Function The pyruvate dehydrogenase complex catalyzes the overall conversion of pyruvate to acetyl-CoA and CO(2). It contains multiple copies of three enzymatic components: pyruvate dehydrogenase (E1), dihydrolipoamide acetyltransferase (E2) and lipoamide dehydrogenase (E3).

Tissue specificity Ubiquitous.

Involvement in disease Defects in PDHA1 are a cause of pyruvate decarboxylase E1 component deficiency (PDHE1 deficiency) [MIM:312170]. PDHE1 deficiency is the most common enzyme defect in patients with primary lactic acidosis. It is associated with variable clinical phenotypes ranging from neonatal death to prolonged survival complicated by developmental delay, seizures, ataxia, apnea, and in some cases to an X-linked form of Leigh syndrome (X-LS).
Defects in PDHA1 are the cause of X-linked Leigh syndrome (X-LS) [MIM:308930]. X-LS is an early-onset progressive neurodegenerative disorder with a characteristic neuropathology consisting of focal, bilateral lesions in one or more areas of the central nervous system, including the brainstem, thalamus, basal ganglia, cerebellum, and spinal cord. The lesions are areas of demyelination, gliosis, necrosis, spongiosis, or capillary proliferation. Clinical symptoms depend on which areas of the central nervous system are involved. The most common underlying cause is a defect in oxidative phosphorylation. LS may be a feature of a deficiency of any of the mitochondrial respiratory chain complexes.

Cellular localization Mitochondrion matrix.

Images



Western blot - Anti-PDHA1 antibody [EPR11099] (ab155096)

All lanes : Anti-PDHA1 antibody [EPR11099] (ab155096) at 1/1000 dilution

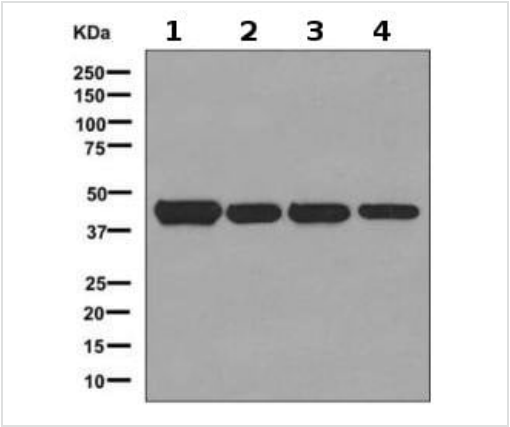
Lane 1 : Wild-type HeLa whole cell lysate
Lane 2 : PDHA1 knockout HeLa whole cell lysate
Lane 3 : HEK-293 whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 43 kDa
Observed band size: 43 kDa

Lanes 1 - 3: Merged signal (red and green). Green - ab155096 observed at 43 kDa. Red - loading control, **ab130007**, observed at 130 kDa.

ab155096 was shown to recognize PDHA1 in wild-type HeLa cells as signal was lost at the expected MW in PDHA1 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and PDHA1 knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. Ab155096 and **ab130007** (Mouse anti Vinculin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-PDHA1 antibody [EPR11099] (ab155096)

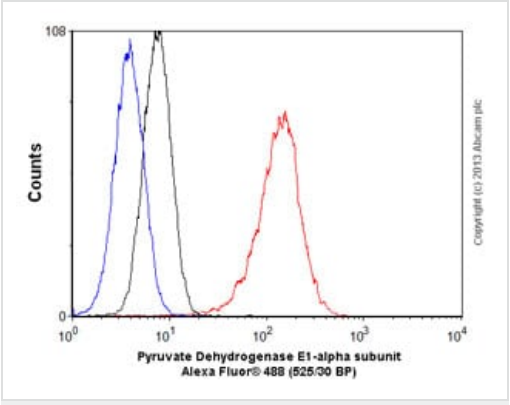
All lanes : Anti-PDHA1 antibody [EPR11099] (ab155096) at 1/1000 dilution

Lane 1 : HepG2 cell lysate
Lane 2 : 293T cell lysate
Lane 3 : HeLa cell lysate
Lane 4 : Jurkat cell lysate

Lysates/proteins at 10 µg per lane.

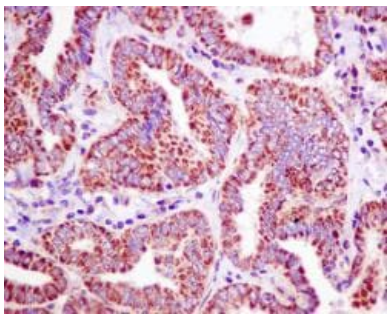
Secondary
All lanes : Goat anti-rabbit HRP conjugated at 1/2000 dilution

Predicted band size: 43 kDa



Flow Cytometry (Intracellular) - Anti-PDHA1 antibody [EPR11099] (ab155096)

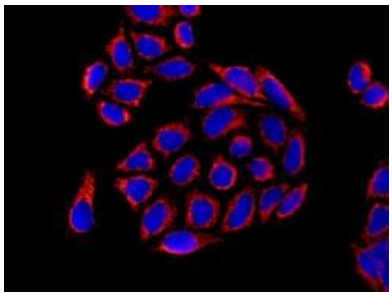
Overlay histogram showing HeLa cells stained with ab155096 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab155096, 1/10000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (**ab150077**) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDHA1 antibody [EPR11099] (ab155096)

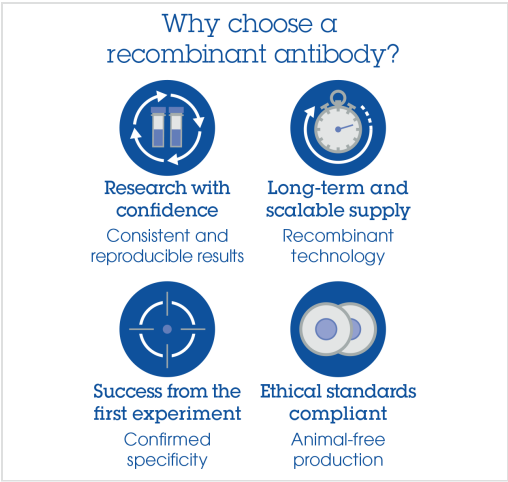
Immunohistochemical analysis of paraffin-embedded Human thyroid carcinoma tissue labeling PDHA1 with ab155096 at 1/50 dilution.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-PDHA1 antibody [EPR11099] (ab155096)

Immunofluorescent analysis of HeLa cells labeling PDHA1 with ab155096 at 1/250 dilution.



Anti-PDHA1 antibody [EPR11099] (ab155096)

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors