

## PDHA1 monoclonal antibody

Catalog: MB66491

Host: Mouse

Reactivity: Human, Mouse

### Background:

The pyruvate dehydrogenase complex catalyzes the conversion of pyruvate and CoA into acetyl-CoA and CO<sub>2</sub> in the presence of NAD<sup>+</sup>. Acetyl-CoA then goes into the citric acid cycle where it reacts with oxaloacetate to form citrate. Acetyl-CoA is also used for fatty acid and cholesterol biosynthesis. The reaction of oxidative decarboxylation of pyruvate therefore serves as a critical link between glycolysis and the citric acid cycle and lipid metabolism. In mammalian cells, the pyruvate dehydrogenase complex is located in the mitochondrial matrix. This complex is comprised of three enzymes: pyruvate dehydrogenase, dihydrolipoamide acetyltransferase, and dihydrolipoamide dehydrogenase. Pyruvate dehydrogenase consists of two subunits:  $\alpha$  and  $\beta$ . This enzyme catalyzes the removal of CO<sub>2</sub> from pyruvate. Mutations in the  $\alpha$  subunits of pyruvate dehydrogenase lead to congenital defects that are usually associated with lactic acidosis, neurodegeneration, and early death. Pyruvate dehydrogenase kinase 1 phosphorylates pyruvate dehydrogenase  $\alpha$ 1 subunit at Ser293 to inactivate its activity. This phosphorylation contributes to the tumor metabolic reprogramming toward glycolysis in hypoxia by inhibiting the citric acid cycle.

### Product:

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.

### Molecular Weight:

~ 43 kDa

### Swiss-Prot:

P08559

### Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

### Applications:

WB (1/500 - 1/1000), IF/ICC (1/50 - 1/100)

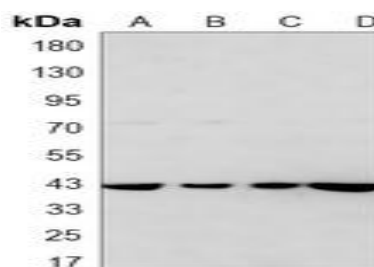
### Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

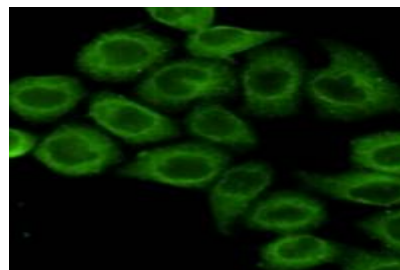
### Specificity:

Recognizes endogenous levels of PDHA1 protein.

### DATA:



Western blot analysis of PDHA1 expression in 293T (A), H1299 (B), mEsc (C), Tc1 (D) whole cell lysates.



Immunofluorescent analysis of PDHA1 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark.

### Note:

For research use only, not for use in diagnostic procedure.

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## PRODUCT DATA SHEET

Bioworld Technology, Inc.

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