abcam

ab155953

Anti-PDHB antibody [EPR11096(B)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR11096(B)
Purification technique	Affinity purification Protein A
Concentration	0.404 - 0.412 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information PDHB

Function	Together with PDHA1 forms the heterotetrameric E1 subunit of the pyruvate dehydrogenase (PDH) complex (PubMed:17474719, PubMed:19081061). The 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 E1 subunit catalyzes both the thiamine pyrophosphate (TPP)-dependent decarboxylation of pyruvate and the reductive acetylation of a lipoyl group covalently linked to the lipoyl-bearing domains of E2 (PubMed:19081061).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Notes

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	PDHB also known as pyruvate dehydrogenase beta subunit plays an important role in the conversion of pyruvate to acetyl-CoA. This protein forms a part of the pyruvate dehydrogenase complex (PDC) which occurs in mitochondria of numerous tissues. The PDHB subunit has a molecular mass of approximately 39 kDa. Expression of PDHB is not limited to one specific type of tissue it is generally found in various tissues indicating its widespread involvement in cellular metabolism.

Biological function summary	PDHB functions as an essential component of the PDC which catalyzes the decarboxylation of pyruvate linking glycolysis to the citric acid cycle. The PDC itself is a large multi-enzyme complex including other subunits such as E1 and E2 which coordinate efficiently to carry out its function. In this way PDHB contributes to energy production by enabling entry of carbon skeletons into the tricarboxylic acid cycle important for ATP generation.
Pathways	PDHB holds a significant role in central metabolic pathways namely glycolysis and the citric acid cycle. The conversion facilitated by the PDC forms a vital cornerstone for metabolic flux regulation influencing gluconeogenesis and fatty acid synthesis. PDHB also interacts with proteins such as pyruvate dehydrogenase kinase which regulates the PDC activity by phosphorylation thereby affecting energy metabolism directly.
Associated diseases and disorders	Alterations in PDHB can lead to metabolic disorders such as pyruvate dehydrogenase deficiency potentially causing neurological dysfunction due to impaired energy metabolism. PDHB mutations also have a link to mitochondrial diseases reflecting its significant role in energy homeostasis. In these contexts proteins like the pyruvate dehydrogenase phosphatase are involved highlighting the clinical relevance of PDHB alterations in maintaining proper metabolic health.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

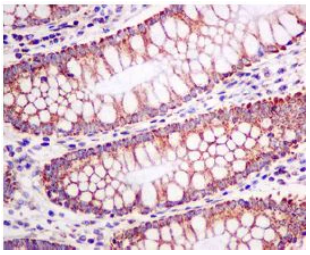
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

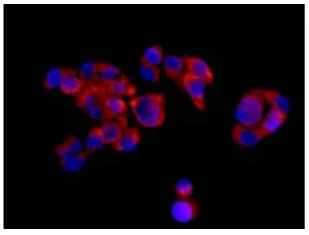
9 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDHB antibody [EPR11096(B)] (ab155953)

PDHB Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PDHB antibody

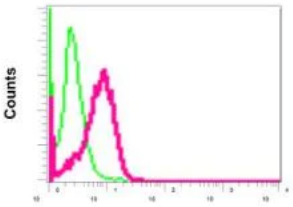
Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling PDHB with ab155953 at 1/50 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-PDHB antibody [EPR11096(B)] (ab155953)

PDHB Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PDHB antibody

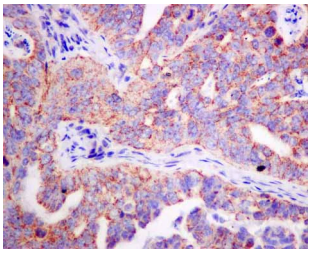
Immunofluorescent analysis of HepG2 cells labeling PDHB with ab155953 at 1/100 dilution.



Flow Cytometry (Intracellular) - Anti-PDHB antibody [EPR11096(B)] (ab155953)

PDHB Flow Cytometry (Intracellular) staining using rabbit Anti-PDHB antibody

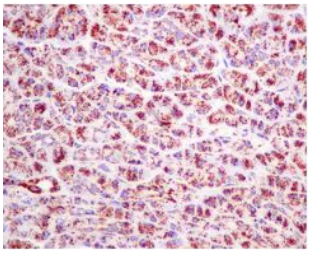
Intracellular flow cytometric analysis of permeabilized A375 cells labeling PDHBwith ab155953 at 1/10 dilution (red) compared with a rabbit IgG negative control (green).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDHB antibody [EPR11096(B)] (ab155953)

PDHB Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PDHB antibody

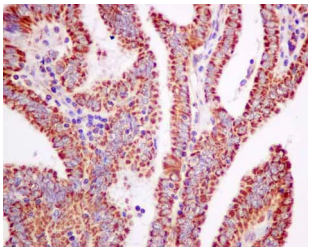
ab155953 showing +ve staining in Human gastric adenocarcinoma.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDHB antibody [EPR11096(B)] (ab155953)

PDHB Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PDHB antibody

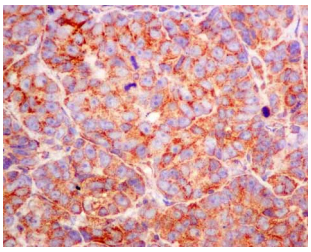
Immunohistochemical analysis of paraffin-embedded Human pancreas tissue labeling PDHB with ab155953 at 1/50 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDHB antibody [EPR11096(B)] (ab155953)

PDHB Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PDHB antibody

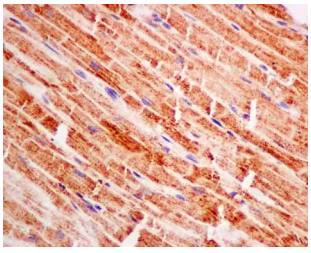
ab155953 showing +ve staining in Human thyroid gland carcinoma.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDHB antibody [EPR11096(B)] (ab155953)

PDHB Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PDHB antibody

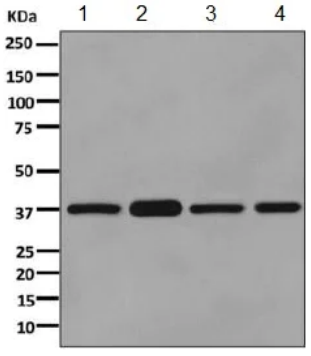
ab155953 showing +ve staining in Human ovarian carcinoma.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDHB antibody [EPR11096(B)] (ab155953)

PDHB Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PDHB antibody

ab155953 showing +ve staining in Human heart.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Western blot - Anti-PDHB antibody [EPR11096(B)] (ab155953)

All lanes:
Western blot - Anti-PDHB antibody [EPR11096(B)] (ab155953) at 1/1000 dilution

Lane 1:
HepG2 cell lysate at 10 µg

Lane 2:
Human fetal heart tissue lysate at 10 µg

Lane 3:
HeLa cell lysate at 10 µg

Lane 4:
A375 cell lysate at 10 µg

Secondary

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

Predicted band size: 39 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.