abcam

ab175203

Anti-HIBADH antibody [EPR12519(B)]

Recombinant | RabMAb | KO Validated

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	EPR12519(B)
Purification technique	Affinity purification Protein A
Concentration	0.124 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	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Not recommended

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Cow
Dilution info	-
Notes	-

Species	Orangutan
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

Not recommended

Species	Mouse, Rat, Cow, Orangutan
Dilution info	-
Notes	-

WB

Tested

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

Not recommended

Species	Mouse, Rat, Cow, Orangutan
Dilution info	-
Notes	-

ICC/IF

Tested

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

Not recommended

Species	Mouse, Rat, Cow, Orangutan
Dilution info	-
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.

Not recommended

Species	Mouse

Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Rat
Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Cow
Dilution info	-
Notes	-

Species	Orangutan
Dilution info	-
Notes	-

Target data

See full target information HIBADH

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

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	HIBADH known as 3-hydroxyisobutyrate dehydrogenase plays a role in the catabolic pathway of valine. It catalyzes the oxidation of 3-hydroxyisobutyrate to 3-oxopropanoate. This enzyme weighs approximately 33 kDa. Expression of HIBADH occurs predominantly in the liver kidney and to a lesser extent the heart and skeletal muscle tissues. High expression in these organs suggests its importance in energy metabolism and intermediate metabolite processing.
Biological function summary	This enzyme facilitates the metabolism of amino acids by converting valine-derived intermediates. HIBADH contributes significantly to energy production particularly during periods of fasting. It is not typically recognized as part of a larger protein complex functioning independently within metabolic pathways. Its role in energy homeostasis indicates its essential part in maintaining cellular function during metabolic stress.
Pathways	HIBADH is integral to the valine degradation pathway and also impacts the broader branched-chain amino acid catabolism process. These pathways are critical for recycling amino acids for ATP production. HIBADH interacts with other enzymes like acyl-CoA dehydrogenases which further process breakdown products. This interaction highlights HIBADH's connection to a consistent and efficient metabolic network ensuring effective energy yield from valine.
Associated diseases and disorders	HIBADH has relevance to maple syrup urine disease and its metabolic management. Proper function of HIBADH is essential to avoid accumulation of toxic valine metabolites linked to this condition. Additionally connection to the protein BCKDHA hints at broader implications for amino acid metabolism disorders. BCKDHA part of the branched-chain alpha-ketoacid dehydrogenase complex indicates HIBADH's involvement in a critical intersection of metabolic control and disease prevention.

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

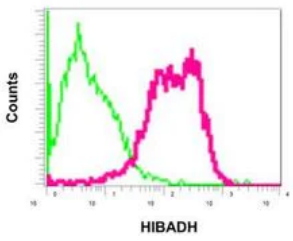
We do not recommend this combination. It is not covered by our product promise.

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.

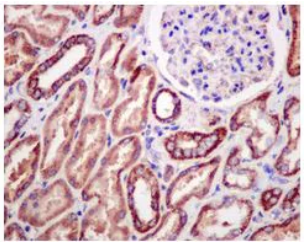
7 product images



Flow Cytometry (Intracellular) - Anti-HIBADH antibody [EPR12519(B)] (ab175203)

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

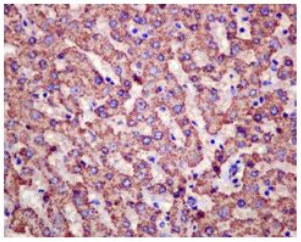
Intracellular flow cytometric analysis of permeabilized HepG2 cells labeling HIBADHwith ab175203at 1/10 dilution (red) compared to a Rabbit IgG (green).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HIBADH antibody [EPR12519(B)] (ab175203)

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

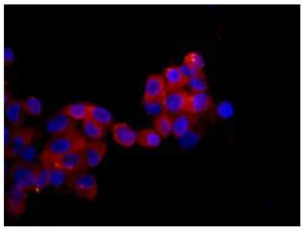
Immunohistochemical analysis of paraffin embedded Human kidney tissue labeling HIBADH with ab175203 at 1/50 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HIBADH antibody [EPR12519(B)] (ab175203)

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

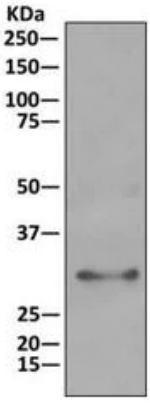
Immunohistochemical analysis of paraffin embedded Human liver tissue labeling HIBADH with ab175203 at 1/50 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-HIBADH antibody [EPR12519(B)] (ab175203)

HIBADH Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-HIBADH antibody

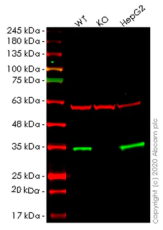
Immunofluorescent staining of HepG2 cells labeling HIBADH with ab175203 at 1/100 dilution (red). DAPI nuclear staining (blue).



Immunoprecipitation - Anti-HIBADH antibody [EPR12519(B)] (ab175203)

Western blot analysis on immunoprecipitation pellet from HepG2 cell lysate labeling HIBADH with ab175203 at 1/10 dilution.
All lanes:
Immunoprecipitation - Anti-HIBADH antibody [EPR12519(B)] (ab175203)

Predicted band size: 35 kDa



Western blot - Anti-HIBADH antibody [EPR12519(B)] (ab175203)

HIBADH Western blot staining using rabbit Anti-HIBADH antibody

Lanes 1-3: Merged signal (red and green). Green - ab175203 observed at 35 kDa. Red - loading control ab7291 observed at 50 kDa.
ab175203 Anti-HIBADH antibody [EPR12519(B)] was shown to specifically react with HIBADH in wild-type HeLa cells. Loss of signal was observed when knockout cell line ab265888 (knockout cell lysate ab257986) was used. Wild-type and HIBADH knockout samples were subjected to SDS-PAGE. ab175203 and Anti-alpha Tubulin antibody [DM1A] - Loading Control (ab7291) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-HIBADH antibody [EPR12519(B)] (ab175203) at 1/1000 dilution

Lane 1:
Wild-type HeLa cell lysate at 20 µg

Lane 2:

Western blot - Human HIBADH knockout HeLa cell lysate (ab257986) at 20 µg

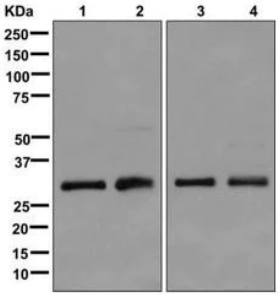
Lane 3:
HepG2 cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/10000 dilution

Predicted band size: 35 kDa, 78 kDa, 80 kDa

Observed band size: 100-125 kDa, 35 kDa, 80 kDa



Western blot - Anti-HIBADH antibody [EPR12519(B)] (ab175203)

All lanes:
Western blot - Anti-HIBADH antibody [EPR12519(B)] (ab175203) at 1/1000 dilution

Lane 1:
Human fetal liver tissue lysate at 10 µg

Lane 2:
Human fetal heart tissue lysate at 10 µg

Lane 3:
HepG2 cell lysate at 10 µg

Lane 4:
Human fetal kidney tissue lysate at 10 µg

Predicted band size: 35 kDa

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