abcam

ab249857

Anti-HIBADH antibody [EPR12519(B)] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR12519(B)
Purification technique	Affinity purification
Concentration	1.027 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.

Notes	-

Not recommended

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

WB

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

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

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

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

ICC/IF

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

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

Flow Cyt (Intra)

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

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

Target data

See full target information HIBADH

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab249857 is the carrier-free version of ab175203.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

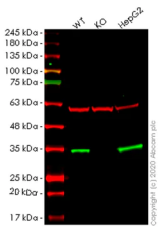
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Western blot - Anti-HIBADH antibody [EPR12519(B)] - BSA and Azide free (ab249857)

HIBADH Western blot staining using rabbit Anti-HIBADH antibody

This data was developed using the same antibody clone in a different buffer formulation (ab175203).
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

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