abcam

ab110284

Anti-HADH antibody [1A12BC8]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.5 Preservative: 0.02% Sodium azide Constituents: HEPES buffered saline
Form	Liquid
Clonality	Monoclonal
Clone number	1A12BC8
Purification technique	Proprietary technique
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purity near homogeneity as judged by SDS-PAGE (purity >95%). The antibody was produced in vitro using hybridomas grown in serum-free medium, and then purified by biochemical fractionation.

Reactivity data

IP

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1 µg/mL
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

IHC-P

Tested

Species	Human
Dilution info	1/250
Notes	Perform heat mediated antigen retrieval - 1 min pressure cook in 1mmol EDTA pH8.

ICC/IF

Tested

Species	Human
Dilution info	5 µg/mL
Notes	-

Target data

See full target information HADH

Function Mitochondrial fatty acid beta-oxidation enzyme that catalyzes the third step of the beta-oxidation cycle for medium and short-chain 3-hydroxy fatty acyl-CoAs (C4 to C10) (PubMed:10231530, PubMed:11489939, PubMed:16725361). Plays a role in the control of insulin secretion by inhibiting the activation of glutamate dehydrogenase 1 (GLUD1), an enzyme that has an important role in regulating amino acid-induced insulin secretion (By similarity). Plays a role in the maintenance of normal spermatogenesis through the reduction of fatty acid accumulation in the testes (By similarity).

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

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

Supplementary info

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

Activity summary	The HADH protein also known as 3-hydroxyacyl-CoA dehydrogenase facilitates the penultimate step in the beta-oxidation of fatty acids. It catalyzes the conversion of 3-hydroxyacyl-CoA to 3-ketoacyl-CoA. This enzyme exhibits a molecular mass of about 34 kDa. HADH is expressed predominantly in the liver kidney heart and muscle tissues reflecting its role in energy metabolism.
Biological function summary	The HADH enzyme holds significant responsibility for mitochondrial fatty acid oxidation. It plays a role in the degradation of medium and short-chain fatty acids. As part of a larger enzyme complex it works integrally with other dehydrogenases to maintain cellular energy levels and metabolic homeostasis especially during fasting or periods of increased energy demand.
Pathways	HADH functions prominently in the beta-oxidation pathway of fatty acid metabolism. This enzyme works in conjunction with acyl-CoA dehydrogenases further highlighting its role in breaking down fatty acids into acetyl-CoA an important molecule for energy production in the citric acid cycle. The activity of HADH interacts closely with other mitochondrial enzymes to maintain efficient energy turnover.
Associated diseases and disorders	Mutations in the HADH gene contribute significantly to diseases such as hyperinsulinism and mitochondrial trifunctional protein deficiency. These conditions showcase the importance of HADH in metabolic regulation and energy balance. HADH-related dysfunctions also connect with enzymes like short-chain 3-hydroxyacyl-CoA dehydrogenase evidencing its role in broader metabolic disease contexts.

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

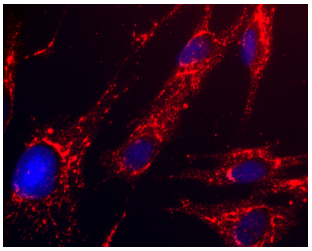
We do not recommend this combination. It is not covered by our product promise.

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.

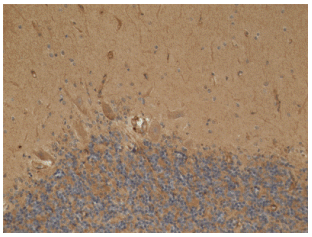
4 product images



Immunocytochemistry/ Immunofluorescence - Anti-HADH antibody [1A12BC8] (ab110284)

HADH Immunocytochemistry/ Immunofluorescence staining using mouse Anti-HADH antibody

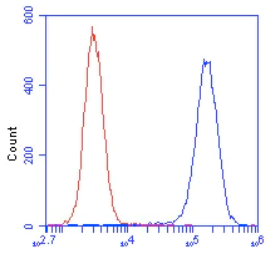
MRC5 fibroblasts labeled with ab110284 at 5µg/ml and stained with Texas Red conjugated to goat anti-mouse secondary.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HADH antibody [1A12BC8] (ab110284)

HADH Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-HADH antibody

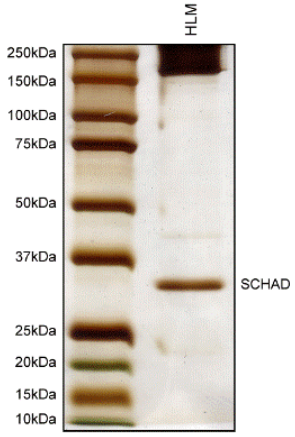
ab110284, at 1/250 dilution, staining HADH in formalin-fixed, paraffin-embedded Human cerebellum by Immunohistochemistry. HADH immunoactivity is most intense in neuronal cell bodies, most notably in the large Purkinje cells.



Flow Cytometry - Anti-HADH antibody [1A12BC8] (ab110284)

HADH Flow Cytometry staining using mouse Anti-HADH antibody

HL-60 cells were stained with 1 µg/ml ab110284 (blue) or an equal amount of an isotype control antibody (red) and analyzed by flow cytometry.



Immunoprecipitation - Anti-HADH antibody [1A12BC8] (ab110284)

HADH immunocaptured from Human liver mitochondria using ab110284.
All lanes:
Immunoprecipitation - Anti-HADH antibody [1A12BC8] (ab110284)

Predicted band size: 34 kDa

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