abcam

ab183739

Anti-Abhd5/CGI-58 antibody [EPR12621]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 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	EPR12621
Purification technique	Affinity purification Protein A
Concentration	0.994 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/1000 - 1/2000
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Predicted

Species	Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/2000
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/200
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information ABHD5

Function	Coenzyme A-dependent lysophosphatidic acid acyltransferase that catalyzes the transfer of an acyl group on a lysophosphatidic acid (PubMed:18606822). Functions preferentially with 1-oleoyl-lysophosphatidic acid followed by 1-palmitoyl-lysophosphatidic acid, 1-stearoyl-lysophosphatidic acid and 1-arachidonoyl-lysophosphatidic acid as lipid acceptor. Functions preferentially with arachidonoyl-CoA followed by oleoyl-CoA as acyl group donors (By similarity). Functions in phosphatidic acid biosynthesis (PubMed:18606822). May regulate the cellular storage of triacylglycerol through activation of the phospholipase PNPLA2 (PubMed:16679289). Involved in keratinocyte differentiation (PubMed:18832586). Regulates lipid droplet fusion (By similarity).

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	Abhd5 also known as CGI-58 is a protein with significant importance in lipid metabolism. It has a molecular weight of approximately 39 kDa and is ubiquitously expressed in tissues throughout the body including adipose tissue and liver. This protein associates with lipid droplets within cells serving a role important for lipid handling and signaling. Abhd5 stands for the alpha/beta hydrolase domain-containing protein 5 indicative of its structure and enzymatic functions.
Biological function summary	The Abhd5/CGI-58 protein acts as a coactivator of adipose triglyceride lipase (ATGL) enhancing its role in triglyceride hydrolysis. This support is vital for energy release from triglycerides in fat cells. Abhd5 does not function alone; it exists within a protein complex where it modulates ATGL's catalytic activity. Furthermore Abhd5 is implicated in broader lipid signaling and metabolic control influencing various cellular responses through its roles within these complexes.
Pathways	Abhd5/CGI-58 is central to the lipid metabolism pathway particularly in the breakdown of triglycerides. By activating ATGL Abhd5 influences the lipolytic pathway which is important for mobilizing stored fats for energy use. In addition to its role with ATGL another protein perilipin regulates this pathway by interacting with lipid droplet-associated proteins including Abhd5 to control access to lipids. The protein influences the signaling crosstalk within metabolic pathways coordinating metabolic responses within the cell.
Associated diseases and disorders	The Abhd5/CGI-58 protein has ties to conditions like lipodystrophy and Chanarin-Dorfman syndrome. Deficiencies or mutations in the CGI-58 protein can impair lipid metabolism leading to abnormal fat distribution and storage. In these diseases the lack of Abhd5 activity affects the interactions with proteins like ATGL which is responsible for triglyceride breakdown. Research continues to explore the relationship between Abhd5 dysfunction and these metabolic disorders aiming to clarify its role in the etiology of such conditions.

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

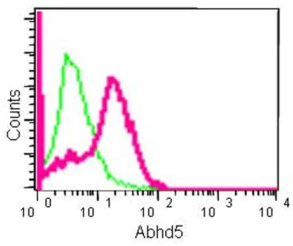
We do not recommend this combination. It is not covered by our product promise.

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.

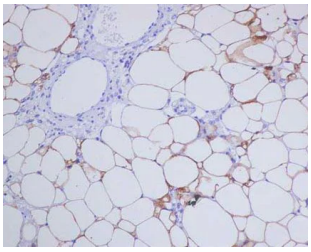
4 product images



Flow Cytometry (Intracellular) - Anti-Abhd5/CGI-58 antibody [EPR12621] (ab183739)

Abhd5/CGI-58 Flow Cytometry (Intracellular) staining using rabbit Anti-Abhd5/CGI-58 antibody

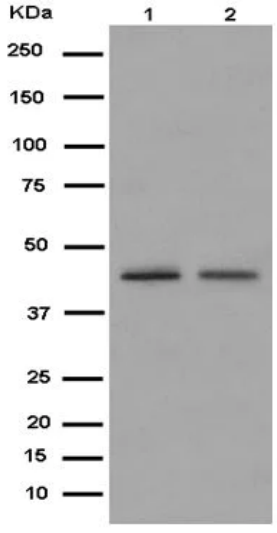
Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed HepG2 cells labeling Abhd5/CGI-58 with ab183739 at 1/200 dilution. Goat anti-rabbit IgG (FITC) at 1/150 dilution was used as the secondary antibody. Rabbit monoclonal IgG was used as the isotype control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Abhd5/CGI-58 antibody [EPR12621] (ab183739)

Abhd5/CGI-58 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Abhd5/CGI-58 antibody

Immunohistochemical analysis of paraffin-embedded Human lipomyoma tissue labeling Abhd5/CGI-58 with ab183739 at 1/2000 dilution. The slide is counterstained with Hematoxylin. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-Abhd5/CGI-58 antibody [EPR12621] (ab183739)

PMID: 28211464, PMID: 19801371, PMID: 18606822, PMID: 18832586.
All lanes:
Western blot - Anti-Abhd5/CGI-58 antibody [EPR12621] (ab183739) at 1/1000 dilution

Lane 1:
HepG2 cell lysate at 10 µg

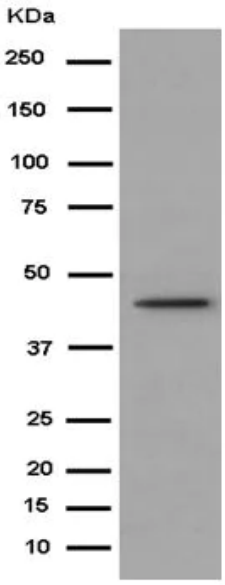
Lane 2:
U87-MG cell lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 39 kDa

Observed band size: 45 kDa



Western blot - Anti-Abhd5/CGI-58 antibody [EPR12621] (ab183739)

PMID: 28211464, PMID: 19801371, PMID: 18606822, PMID: 18832586.
All lanes:
Western blot - Anti-Abhd5/CGI-58 antibody [EPR12621] (ab183739) at 1/1000 dilution

All lanes:
Human fetal liver lysate at 10 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 39 kDa

Observed band size: 45 kDa

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