abcam

ab181281

Anti-Adiponectin antibody [EPR17019]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	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	EPR17019
Purification technique	Affinity purification Protein A
Concentration	0.545 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	**We don't recommend WB for rat species because we observed an extra band around 24 kDa in addition to adiponectin, in rat plasma and rat serum lysates.**

Expected

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

ICC/IF

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/4000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/4000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information Adipoq

Function	Important adipokine involved in the control of fat metabolism and insulin sensitivity, with direct anti-diabetic, anti-atherogenic and anti-inflammatory activities. Stimulates AMPK phosphorylation and activation in the liver and the skeletal muscle, enhancing glucose utilization and fatty-acid combustion. Antagonizes TNF by negatively regulating its expression in various tissues such as liver and macrophages, and also by counteracting its effects. Inhibits endothelial NF-kappa-B signaling through a cAMP-dependent pathway. May play a role in cell growth, angiogenesis and tissue remodeling by binding and sequestering various growth factors with distinct binding affinities, depending on the type of complex, LMW, MMW or HMW.

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	Adiponectin also known as ADIPOQ or adipocyte complement-related protein of 30 kDa (Acrp30) is a 30 kDa protein that plays a significant mechanical role in energy homeostasis. Adiponectin is secreted predominantly by adipose tissue and circulates in the blood. This protein forms various multimeric structures including low-molecular-weight medium-molecular-weight and high-molecular-weight forms each with distinct biological functions. Its expression in adipose tissue links it closely to metabolic processes and functions related to fat storage and energy balance.
Biological function summary	Adiponectin influences glucose regulation and fatty acid oxidation. It acts as a hormone with several metabolic roles including anti-diabetic anti-atherogenic and anti-inflammatory properties. Adiponectin participates in forming a complex with other proteins such as AdipoR1 and AdipoR2 which are receptors facilitating signal transduction. The interaction of adiponectin with its receptors leads to the induction of several lipid and glucose metabolism pathways important for maintaining cellular energy balance.
Pathways	Many regulatory cascades are influenced by adiponectin. This protein is integral to the AMPK signaling pathway and the PPAR signaling pathway. In the AMPK pathway adiponectin enhances insulin sensitivity and stimulates oxidation of fatty acids in muscle tissue. Through the PPAR pathway it influences lipid metabolism and storage. Adiponectin interacts with key proteins such as leptin and resistin coordinating various metabolic pathways to balance energy and glucose levels making it a critical factor in metabolic regulation.
Associated diseases and disorders	Reduced levels of adiponectin associate with conditions like type 2 diabetes and cardiovascular disease. Lower circulating adiponectin concentrations correlate with obesity leading to increased insulin resistance and higher risk of type 2 diabetes. In cardiovascular disease this protein's role links to its anti-inflammatory properties and ability to decrease the proliferation of vascular smooth muscle cells. Adiponectin also interacts with proteins like cytokines that play a role in these conditions affecting the body’s inflammatory responses and metabolic processes highlighting its importance in health and disease management.

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.

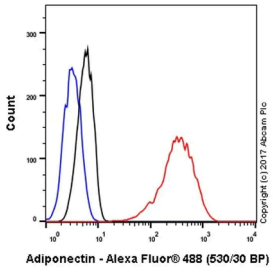
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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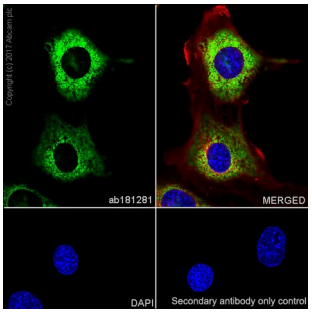
5 product images



Flow Cytometry (Intracellular) - Anti-Adiponectin antibody [EPR17019] (ab181281)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized 3T3-L1 (mouse embryonic fibroblast cell line) cell line labeling Adiponectin with ab181281 at 1/50 (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.



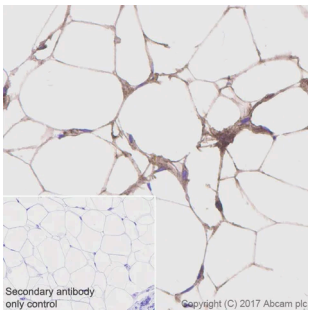
Immunocytochemistry/ Immunofluorescence - Anti-Adiponectin antibody [EPR17019] (ab181281)

Adiponectin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Adiponectin antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized 3T3-L1 (mouse embryonic fibroblast cell line) cells labeling Adiponectin with ab181281 at 1/1000

dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on 3T3-L1 cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

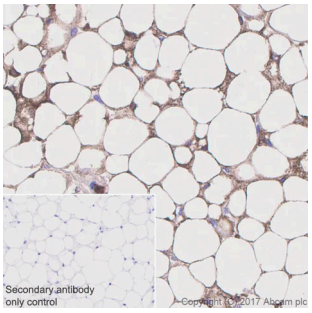


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Adiponectin antibody [EPR17019] (ab181281)

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

Immunohistochemical analysis of paraffin-embedded rat adipose tissue labeling Adiponectin with ab181281 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Cytoplasmic staining on rat adipocytes (PMID: 25676879). Counter stained with Hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

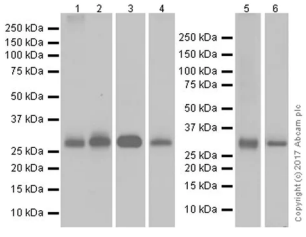


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Western blot - Anti-Adiponectin antibody [EPR17019] (ab181281)

Adiponectin Western blot staining using rabbit Anti-Adiponectin antibody

Exposure times: Lanes 1-2,4-5: 1 second; Lane 3: 3 minutes; Lane 6: 3 seconds.

Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-Adiponectin antibody [EPR17019] (ab181281) at 1/1000 dilution

Lane 1:
Mouse plasma lysate at 20 µg

Lane 2:
Mouse serum lysate at 20 µg

Lane 3:
Mouse placenta lysate at 20 µg

Lane 4:
Mouse white adipose lysate at 20 µg

Lane 5:
Mouse kidney lysate at 20 µg

Lane 6:
Mouse liver lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 26 kDa

Observed band size: 26 kDa

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