


Product datasheet

Anti-Caveolin-1 antibody - Caveolae Marker ab18199

KO VALIDATED

★★★★★ [9 Abreviews](#) [27 References](#) [5 Images](#)

Overview

| | |
|----------------------------|---|
| Product name | Anti-Caveolin-1 antibody - Caveolae Marker |
| Description | Rabbit polyclonal to Caveolin-1 - Caveolae Marker |
| Host species | Rabbit |
| Tested applications | Suitable for: IP, WB Unsuitable for: ICC/IF |
| Species reactivity | Reacts with: Mouse, Rat, Human, Recombinant fragment Predicted to work with: Cow, Dog, Pig  |
| Immunogen | Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. |
| General notes | <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p> |

Properties

| | |
|-----------------------------|--|
| Form | Liquid |
| Storage instructions | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. |
| Storage buffer | pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 98.98% PBS, 1% BSA Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help. |
| Purity | Immunogen affinity purified |
| Clonality | Polyclonal |

Isotype

IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab18199 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|-------------|-----------|--|
| IP | | Use at an assay dependent concentration. |
| WB | ★★★★★ (5) | Use a concentration of 1 µg/ml. Detects a band of approximately 20 kDa (predicted molecular weight: 20 kDa). |

Application notes

Is unsuitable for ICC/IF.

Target

Function

May act as a scaffolding protein within caveolar membranes. Interacts directly with G-protein alpha subunits and can functionally regulate their activity (By similarity). Involved in the costimulatory signal essential for T-cell receptor (TCR)-mediated T-cell activation. Its binding to DPP4 induces T-cell proliferation and NF-kappa-B activation in a T-cell receptor/CD3-dependent manner. Recruits CTNNB1 to caveolar membranes and may regulate CTNNB1-mediated signaling through the Wnt pathway.

Tissue specificity

Expressed in muscle and lung, less so in liver, brain and kidney.

Involvement in disease

Defects in CAV1 are the cause of congenital generalized lipodystrophy type 3 (CGL3) [MIM:612526]; also called Berardinelli-Seip congenital lipodystrophy type 3 (BSCL3). Congenital generalized lipodystrophies are autosomal recessive disorders characterized by a near absence of adipose tissue, extreme insulin resistance, hypertriglyceridemia, hepatic steatosis and early onset of diabetes.

Sequence similarities

Belongs to the caveolin family.

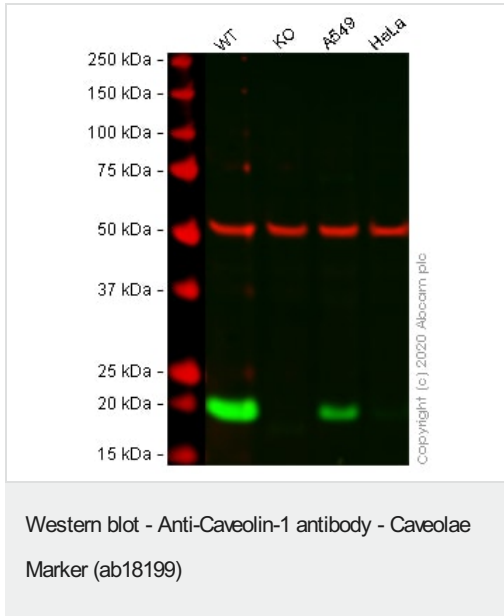
Post-translational modifications

The initiator methionine for isoform Beta is removed during or just after translation. The new N-terminal amino acid is then N-acetylated.

Cellular localization

Golgi apparatus membrane. Cell membrane. Membrane > caveola. Membrane raft. Colocalized with DPP4 in membrane rafts. Potential hairpin-like structure in the membrane. Membrane protein of caveolae.

Images



All lanes : Anti-Caveolin-1 antibody - Caveolae Marker (ab18199) at 1 µg/ml

Lane 1 : Wild-type A-431 (Human epidermoid carcinoma cell line) whole cell lysate

Lane 2 : CAV1 knockout A-431 (Human epidermoid carcinoma cell line) whole cell lysate

Lane 3 : A549 (Human lung carcinoma cell line) whole cell lysate

Lane 4 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lysates/proteins at 20 µg per lane.

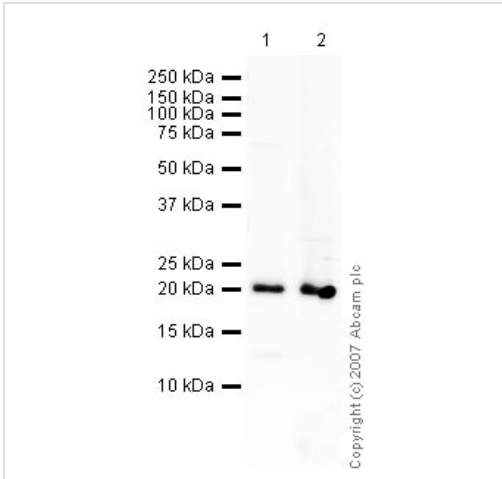
Performed under reducing conditions.

Predicted band size: 20 kDa

Observed band size: 21-24 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab18199 observed at 21-24 kDa. Red - loading control, **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) observed at 55kDa.

ab18199 was shown to react with Caveolin-1 in wild-type A431 cells in western blot. Loss of signal was observed when CAV1 knockout sample was used. Wild-type and CAV1 knockout A431 cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with ab18199 and **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) overnight at 4°C at 1 µg/ml and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-Caveolin-1 antibody - Caveolae Marker (ab18199)

All lanes : Anti-Caveolin-1 antibody - Caveolae Marker (ab18199) at 1 µg/ml

Lane 1 : Mouse Heart Lysate

Lane 2 : Human Heart Lysate

Lysates/proteins at 10 µg per lane.

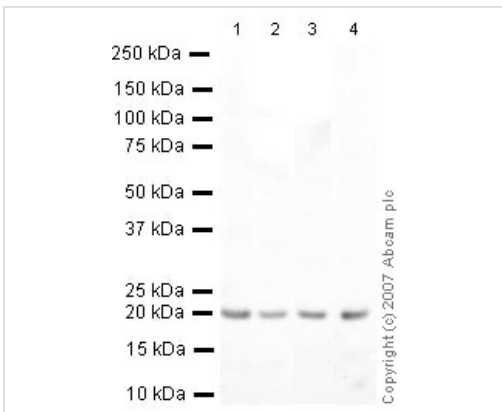
Secondary

All lanes : Alexa Fluor Goat polyclonal to Rabbit IgG (700) at 1/5000 dilution

Performed under reducing conditions.

Predicted band size: 20 kDa

Observed band size: 20 kDa



Western blot - Anti-Caveolin-1 antibody - Caveolae Marker (ab18199)

All lanes : Anti-Caveolin-1 antibody - Caveolae Marker (ab18199) at 1 µg/ml

Lane 1 : NIH/3T3 whole cell lysate ([ab7179](#))

Lane 2 : MEF1 (Mouse embryonic fibroblast cell line) Whole Cell Lysate

Lane 3 : Heart (Mouse) Tissue Lysate

Lane 4 : Heart (Rat) Tissue Lysate

Lysates/proteins at 10 µg per lane.

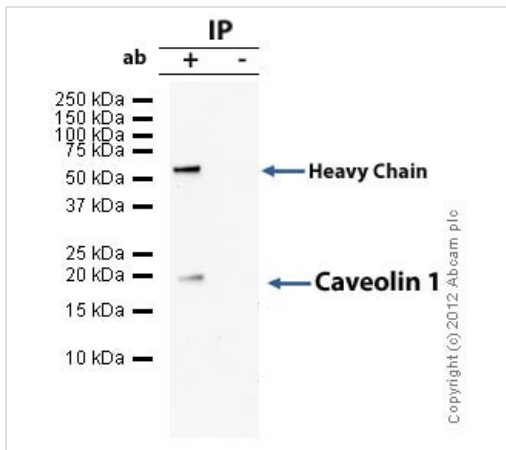
Secondary

All lanes : IRDye 680 Conjugated Goat Anti-Rabbit IgG (H+L) at 1/10000 dilution

Performed under reducing conditions.

Predicted band size: 20 kDa

Observed band size: 20 kDa



Immunoprecipitation - Anti-Caveolin-1 antibody - Caveolae Marker (ab18199)

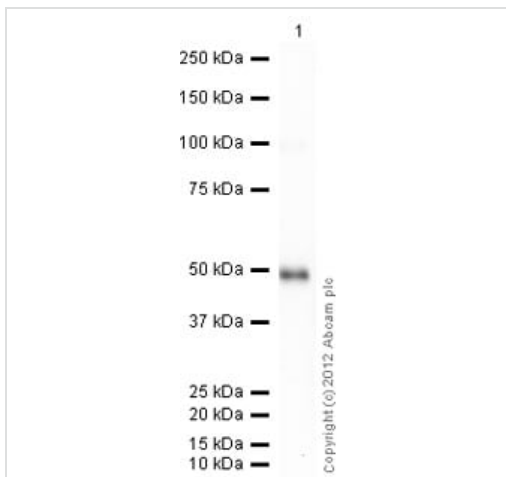
Caveolin 1 - Caveolae Marker was immunoprecipitated using 0.5mg Mouse Heart whole tissue lysate, 5µg of Rabbit polyclonal to Caveolin 1 and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).

The antibody was incubated under agitation with Protein G beads for 10min, Mouse Heart whole tissue lysate lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.

Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab18199.

Secondary: Clean blot (HRP conjugate) at 1/1000 dilution.

Band: 20kDa: Caveolin 1 - Caveolae Marker.



Western blot - Anti-Caveolin-1 antibody - Caveolae Marker (ab18199)

Anti-Caveolin-1 antibody - Caveolae Marker (ab18199) at 1 µg/ml + Recombinant Human Caveolin-1 protein ([ab114170](#)) at 0.01 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed ([ab97080](#)) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 20 kDa

Exposure time: 1 minute

ab18199 recognizes the full length tagged recombinant Caveolin 1 protein ([ab114170](#)) which has an expected molecular weight of 46 kDa.

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