abcam

Product datasheet

Anti-Caveolin-2 antibody ab2911

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Overview

Product name	Anti-Caveolin-2 antibody
Description	Rabbit polyclonal to Caveolin-2
Host species	Rabbit
Specificity	Detects caveolin-2 from rat tissues. This antibody does not detect caveolin-1 or -3.
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Mouse, Rat **Predicted to work with:** Sheep, Rabbit, Cow, Cat, Human, Pig, Chimpanzee, Gorilla, African green monkey, African bush elephant
Immunogen	Synthetic peptide corresponding to Rat Caveolin-2 aa 1-100. Database link: **Q2IBC5** Run BLAST with Run BLAST with
General notes	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. 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

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	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab2911 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
WB	★★★★☆ **(2)**	Use at an assay dependent concentration. Can be blocked with Caveolin-2 peptide.

Target

Function May act as a scaffolding protein within caveolar membranes. Interacts directly with G-protein alpha subunits and can functionally regulate their activity. Acts as an accessory protein in conjunction with CAV1 in targeting to lipid rafts and driving caveolae formation. The Ser-36 phosphorylated form has a role in modulating mitosis in endothelial cells. Positive regulator of cellular mitogenesis of the MAPK signaling pathway. Required for the insulin-stimulated nuclear translocation and activation of MAPK1 and STAT3, and the subsequent regulation of cell cycle progression.

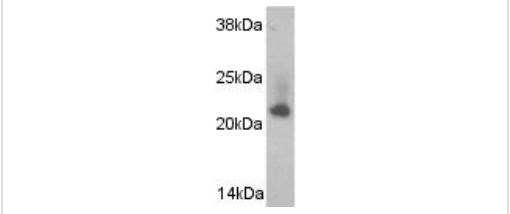
Tissue specificity Expressed in endothelial cells, smooth muscle cells, skeletal myoblasts and fibroblasts.

Sequence similarities Belongs to the caveolin family.

Post-translational modifications Phosphorylated on serine and tyrosine residues. CAV1 promotes phosphorylation on Ser-23 which then targets the complex to the plasma membrane, lipid rafts and caveolae. Phosphorylation on Ser-36 appears to modulate mitosis in endothelial cells (By similarity). Phosphorylation on both Tyr-19 and Tyr-27 is required for insulin-induced 'Ser-727' phosphorylation of STAT3 and its activation. Phosphorylation on Tyr-19 is required for insulin-induced phosphorylation of MAPK1 and DNA binding of STAT3. Tyrosine phosphorylation is induced by both EGF and insulin.

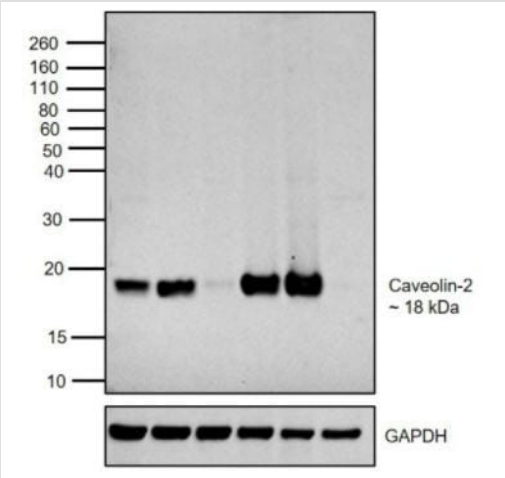
Cellular localization Nucleus. Cytoplasm. Golgi apparatus membrane. Cell membrane. Membrane > caveola. Potential hairpin-like structure in the membrane. Membrane protein of caveolae. Tyr-19-phosphorylated form is enriched at sites of cell-cell contact and is translocated to the nucleus in complex with MAPK1 in response to insulin (By similarity). Tyr-27-phosphorylated form is located both in the cytoplasm and plasma membrane. CAV1-mediated Ser-23-phosphorylated form locates to the plasma membrane. Ser-36-phosphorylated form resides in intracellular compartments.

Images



Western blot - Anti-Caveolin-2 antibody (ab2911)

Western blot of caveolin-2 on rat skeletal muscle protein extract using ab2911.



Western blot - Anti-Caveolin-2 antibody (ab2911)

All lanes : Anti-Caveolin-2 antibody (ab2911) at 2 µg/ml

Lane 1 : 3T3-L1 lysate
Lane 2 : 3T3-L1 differentiated to adipocytes
Lane 3 : Mouse Heart lysate
Lane 4 : Mouse Lung lysate
Lane 5 : Mouse Adipose lysate
Lane 6 : Mouse Spleen lysate

Secondary

All lanes : Goat anti-Rabbit IgG (H+L) Superclonal Recombinant Secondary Antibody, HRP at 1/4000 dilution

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