BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Caveolin-2/CAV2 Antibody Picoband®

Catalog Number: A01574

About CAV2

Caveolin-2 is a protein that in humans is encoded by the CAV2 gene. It is mapped to 7q31.1-q31.2. The protein encoded by this gene is a major component of the inner surface of caveolae, small invaginations of the plasma membrane, and is involved in essential cellular functions, including signal transduction, lipid metabolism, cellular growth control and apoptosis. This protein may function as a tumor suppressor. Caveolin-2 is a protein related to caveolin-1 which is derived caveolin-enriched membranes. CAV2 and CAV1 are similar in most respects and they differ in their functional interactions with heterotrimeric G proteins. Both of them are expressed in neuronal cells. Caveolin-2 was upregulated in response to neuronal cell injury.

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Overview

Product Name	Anti-Caveolin-2/CAV2 Antibody Picoband®
Reactive Species	Human, Monkey, Mouse, Rat
Description	Boster Bio Anti-Caveolin-2/CAV2 Antibody Picoband® catalog # A01574. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P51636

Technical Details

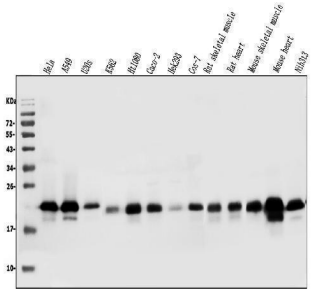
Immunogen	E.coli-derived human Caveolin-2/CAV2 recombinant protein (Position: L3-D162).

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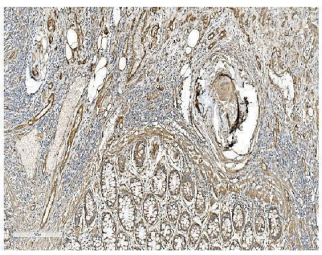
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.25ug/ml, Human, Mouse, Monkey, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 4ug/ml, Human Immunofluorescence, 4ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/ml, - Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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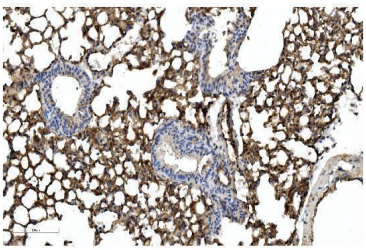
Anti-Caveolin-2/CAV2 Antibody Picoband® (A01574) Images



Western blot analysis of Caveolin-2/CAV2 using anti-Caveolin-2/CAV2 antibody (A01574). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human A549 whole cell lysates, Lane 3: human U20S whole cell lysates, Lane 4: human K562 whole cell lysates, Lane 5: human HT1080 whole cell lysates, Lane 6: human CACO-2 whole cell lysates, Lane 7: human HEK293 whole cell lysates, Lane 8: monkey COS-7 whole cell lysates, Lane 9: rat skeletal muscle tissue lysates, Lane 10: rat heart tissue lysates, Lane 11: mouse skeletal muscle tissue lysates, Lane 12: mouse heart tissue lysates, Lane 13: mouse NIH/3T3 whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Caveolin-2/CAV2 antigen affinity purified polyclonal antibody (Catalog # A01574) at 0.25 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Caveolin-2/CAV2 at approximately 22KD. The expected band size for Caveolin-2/CAV2 is at 22KD.



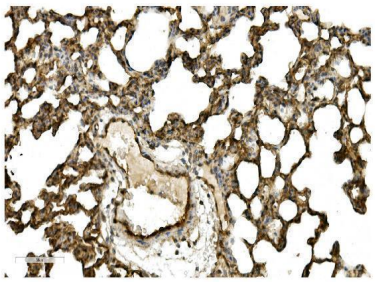
IHC analysis of Caveolin-2/CAV2 using anti Caveolin-2/CAV2 antibody (A01574). Caveolin-2/CAV2 was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Caveolin-2/CAV2 Antibody (A01574) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



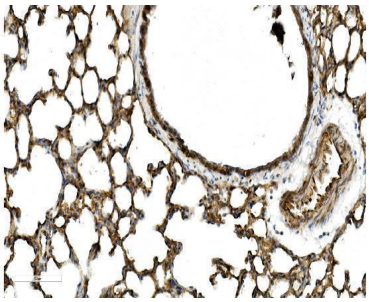
IHC analysis of Caveolin-2/CAV2 using anti Caveolin-2/CAV2 antibody (A01574). Caveolin-2/CAV2 was detected in paraffin-embedded section of mouse lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Caveolin-2/CAV2 Antibody (A01574) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with

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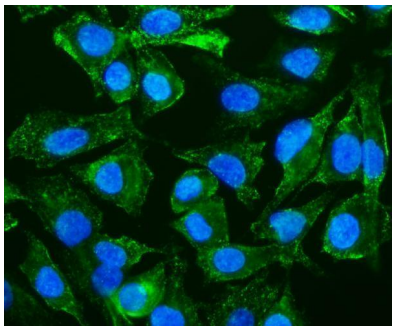
DAB as the chromogen.



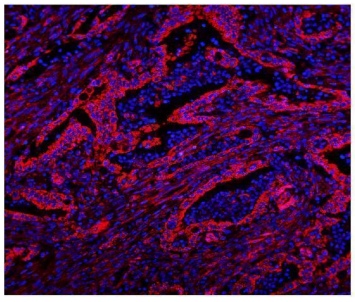
IHC analysis of Caveolin-2/CAV2 using anti Caveolin-2/CAV2 antibody (A01574). Caveolin-2/CAV2 was detected in paraffin-embedded section of rat lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Caveolin-2/CAV2 Antibody (A01574) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of Caveolin-2/CAV2 using anti Caveolin-2/CAV2 antibody (A01574). Caveolin-2/CAV2 was detected in paraffin-embedded section of rat lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Caveolin-2/CAV2 Antibody (A01574) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

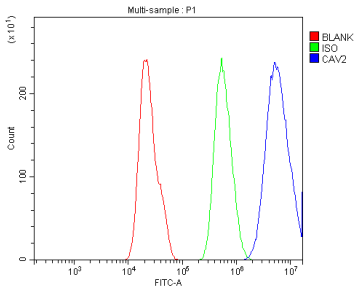


IF analysis of Caveolin-2/CAV2 using anti-Caveolin-2/CAV2 antibody (A01574). Caveolin-2/CAV2 was detected in immunocytochemical section of A549 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-Caveolin-2/CAV2 Antibody (A01574) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IF analysis of Caveolin-2/CAV2 using anti-Caveolin-2/CAV2 antibody (A01574). Caveolin-2/CAV2 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-Caveolin-2/CAV2 Antibody (A01574) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

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Flow Cytometry analysis of A549 cells using anti-Caveolin-2/CAV2 antibody (A01574).Overlay histogram showing A549 cells stained with A01574 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Caveolin-2/CAV2 Antibody (A01574,1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Anti-Caveolin-2/CAV2 Antibody

For Research Use Only. Not for use in diagnostic procedures.