

Anti-Caveolin-1 Antibody
Catalog # ABO10832**Specification**

Anti-Caveolin-1 Antibody - Product Information

Application	WB, IHC
Primary Accession	Q03135
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Caveolin-1(CAV1) detection. Tested with WB, IHC-P, IHC-F, ICC in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Caveolin-1 Antibody - Additional Information

Gene ID 857

Other Names

Caveolin-1, CAV1, CAV

Calculated MW

20472 MW KDa

Application Details

Immunocytochemistry , 0.5-1 µg/ml, Human, -
Immunohistochemistry(Frozen Section), 0.5-1 µg/ml, Rat, Mouse
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse

Subcellular Localization

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

Tissue Specificity

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

Protein Name

Caveolin-1

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human Caveolin-1(164-178aa GKIFSNVRINLQKEI), different from the related rat and mouse sequences by three amino acids.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the caveolin family.

Anti-Caveolin-1 Antibody - Protein Information

Name CAV1

Synonyms CAV

Function

May act as a scaffolding protein within caveolar membranes (PubMed: 11751885). Forms a stable heterooligomeric complex with CAV2 that targets to lipid rafts and drives caveolae formation. Mediates the recruitment of CAVIN proteins (CAVIN1/2/3/4) to the caveolae (PubMed: 19262564). 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 (PubMed: 17287217). Recruits CTNNB1 to caveolar membranes and may regulate CTNNB1-mediated signaling through the Wnt pathway (By similarity). Negatively regulates TGFβ1-mediated activation of SMAD2/3 by mediating the internalization of TGFβR1 from membrane rafts leading to its subsequent degradation (PubMed: 25893292). Binds 20(S)-hydroxycholesterol (20(S)-OHC) (By similarity).

Cellular Location

Golgi apparatus membrane; Peripheral membrane protein. Cell membrane; Peripheral membrane protein. Membrane, caveola; Peripheral membrane protein. Membrane raft. Golgi apparatus, trans-Golgi network {ECO:0000250|UniProtKB:P33724} Note=Colocalized with DPP4 in membrane rafts. Potential hairpin-like structure in the membrane. Membrane protein of caveolae

Tissue Location

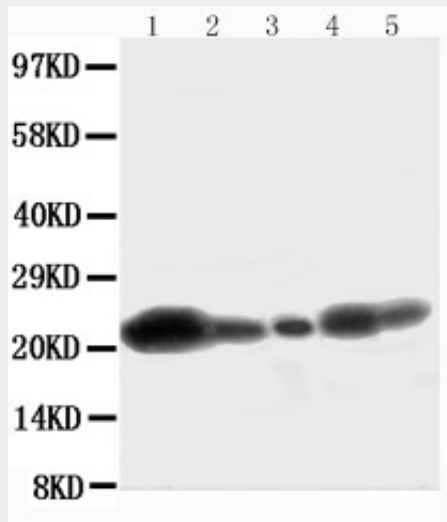
Skeletal muscle, liver, stomach, lung, kidney and heart (at protein level). Expressed in the brain

Anti-Caveolin-1 Antibody - Protocols

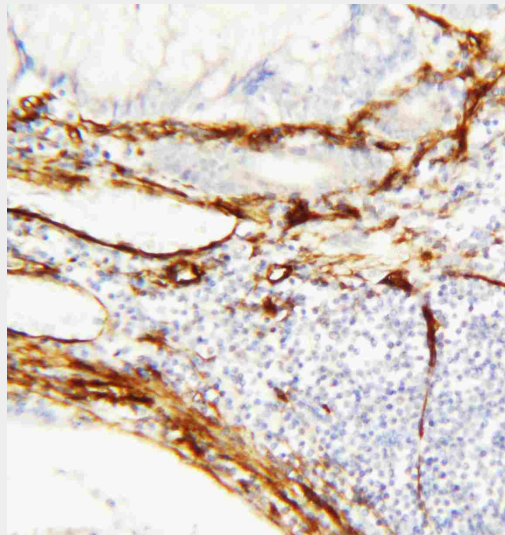
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Caveolin-1 Antibody - Images



Anti-Caveolin-1 antibody, ABO10832, Western blotting
Lane 1: U87 Cell Lysate
Lane 2: HELA Cell Lysate
Lane 3: MCF-7 Cell Lysate
Lane 4: A549 Cell Lysate
Lane 5: HT1080 Cell Lysate



Anti-Caveolin-1 antibody, ABO10832, IHC(P)
IHC(P): Human Mammary Cancer Tissue

Anti-Caveolin-1 Antibody - Background

CAV1, Caveolin-1, is a protein that in humans is encoded by the CAV1 gene. The CAV1 gene is mapped to 7q31.2. The scaffolding protein encoded by this gene is the main component of the caveolae plasma membranes found in most cell types. The protein links integrin subunits to the tyrosine kinase FYN, an initiating step in coupling integrins to the Ras-ERK pathway and promoting

cell cycle progression. The gene is a tumor suppressor gene candidate and a negative regulator of the Ras-p42/44 MAP kinase cascade. CAV1 and CAV2 are located next to each other on chromosome 7 and express colocalizing proteins that form a stable hetero-oligomeric complex. By using alternative initiation codons in the same reading frame, two isoforms(alpha and beta) are encoded by a single transcript from this gene.