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Caveolin-1 Antibody
Catalog # ASC12027

Specification

Caveolin-1 Antibody - Product Information

Application	**WB**
Primary Accession	Q03135
Other Accession	15451856, NP_001744, 857
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**20472**
Application Notes	**Caveolin-1 antibody can be used for detection of Caveolin-1 by Western blot at 1 - 2 µg/ml.**

Caveolin-1 Antibody - Additional Information

Gene ID **857**

Other Names
Caveolin-1 Antibody: Caveolin-1, BSCL3, CGL3, LCCNS, MSTP085, PPH3, VIP21

Precautions
Caveolin-1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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 TGFB1-mediated activation of SMAD2/3 by mediating the internalization of TGFBR1 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

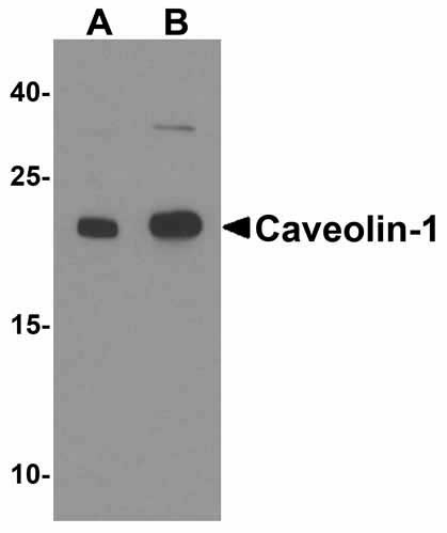
Tissue Location
Skeletal muscle, liver, stomach, lung, kidney and heart (at protein level). Expressed in the brain

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 Cytomety
- Cell Culture

Caveolin-1 Antibody - Images



Western blot analysis of Caveolin-1 in human lung tissue lysate with Caveolin-1 antibody at (A) 1 and (B) 2 µg/mL.

Caveolin-1 Antibody - Background

Caveolin-1 Antibody: Caveolin-1 is a scaffolding protein that is the main component of the caveolae plasma membranes found in most cell types (1). 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 (2). The gene is a tumor suppressor gene candidate and a negative regulator of the Ras-p42/44 mitogen-activated kinase cascade (3). Mutations in this gene have been associated with Berardinelli-Seip congenital lipodystrophy (4).

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Glenney JR Jr. The sequence of human caveolin reveals identity with VIP21, a component of transport vesicles. FEBS Lett. 1992; 314:45-8.;Wary KK, Mariotti A, Zurzolo C, et al. A requirement for caveolin-1 and associated kinase Fyn in integrin signaling and anchorage-dependent cell growth. Cell 1998; 94:625-34.;Capozza F, Williams TM, Schubert W, et al. Absence of caveolin-1 sensitizes mouse skin to carcinogen-induced epidermal hyperplasia and tumor formation. Am. J. Pathol. 2003; 162:2029-39.;Kim CA, Delepine M, Boutet E, et al. Association of a homozygous nonsense caveolin-1 mutation with Berardinelli-Seip congenital lipodystrophy. J. Clin. Endocrinol. Metab. 2008; 93:1129-34.