Anti-Caveolin-1 Antibody [A3E6]

HA601005

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 20 kDa
Clone number:	A3E6

Description: Caveolin-1 is a protein that in humans is encoded by the CAV1 gene. 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. Caveolin 1 has been shown to interact with heterotrimeric G proteins, Src tyrosine kinases (Src, Lyn) and H-Ras, cholesterol, TGF beta receptor 1, endothelial NOS, androgen receptor, amyloid precursor protein, gap junction protein, alpha 1, nitric oxide synthase 2A, epidermal growth factor receptor, endothelin receptor type B, PDGFRB, PDGFRA, PTGS2, TRAF2, estrogen receptor alpha, caveolin 2, PLD2, Bruton's tyrosine kinase and SCP2. All these interactions are through a caveolin-scaffolding domain (CSD) within caveolin-1 molecule. Molecules that interact with caveolin-1 contain caveolin-binding motifs (CBM).

Immunogen: Recombinant protein within human Caveolin-1 aa 1-150.

Positive control: SiHa cell lysates, human liver tissue, human lung tissue, human lung carcinoma tissue.

Subcellular location: Cell membrane, golgi apparatus membrane, trans-golgi network, caveola, membrane raft.

Database links: SwissProt: Q03135 Human

Recommended Dilutions:

WB	1:500
IHC-P	1:800-1:2,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein G affinity purified.

Images

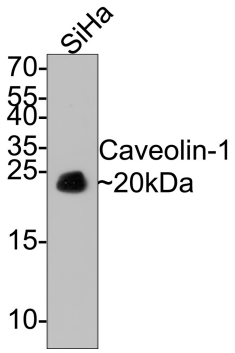

Fig1: Western blot analysis of Caveolin-1 on SiHa cell lysates with Mouse anti-Caveolin-1 antibody (HA601005) at 1/500 dilution.

Lysates/proteins at 10 µg/Lane.

Predicted band size: 20 kDa
Observed band size: 20 kDa

Exposure time: 1 minute;

15% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601005) at 1/500 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:100,000 dilution was used for 1 hour at room temperature.

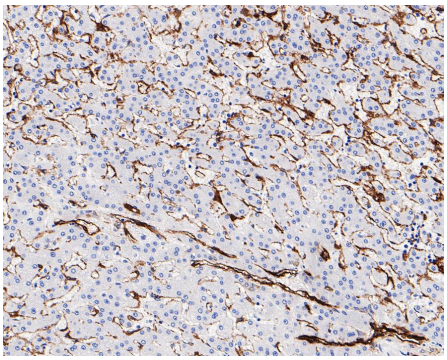

Fig2: Immunohistochemical analysis of paraffin-embedded human liver tissue with Mouse anti-Caveolin-1 antibody (HA601005) at 1/800 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601005) at 1/800 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

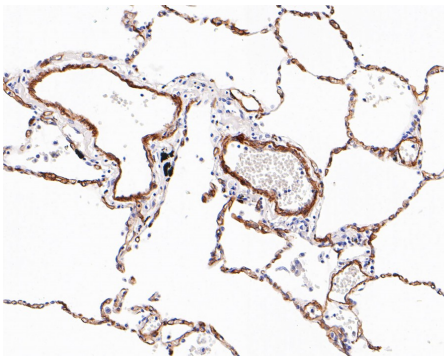

Fig3: Immunohistochemical analysis of paraffin-embedded human lung tissue with Mouse anti-Caveolin-1 antibody (HA601005) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601005) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

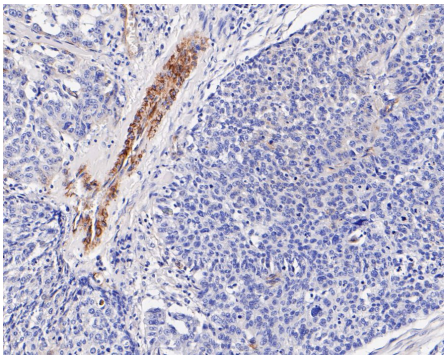

Fig4: Immunohistochemical analysis of paraffin-embedded human lung carcinoma tissue with Mouse anti-Caveolin-1 antibody (HA601005) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601005) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Bai X et. al. CAV1-CAVIN1-LC3B-mediated autophagy regulates high glucose-stimulated LDL transcytosis. Autophagy. 2019 Aug.
2. Sahu G. et. al. Junctophilin Proteins Tether a Cav1-RyR2-KCa3.1 Tripartite Complex to Regulate Neuronal Excitability. Cell Rep. 2019 Aug.