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CAV2 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1935a

Product Information

Application	WB, IHC, FC, E
Primary Accession	P51636
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5E9E2
Isotype	IgG1
Calculated MW	18291
Description	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. This gene and related family member (CAV1) are located next to each other on chromosome 7, and express colocalizing proteins that form a stable hetero-oligomeric complex. Alternatively spliced transcript variants encoding different isoforms have been identified for this gene. Additional isoforms resulting from the use of alternate in-frame translation initiation codons have also been described, and shown to have preferential localization in the cell (PMID:11238462).
Immunogen	Purified recombinant fragment of human CAV2 (AA: 1-86) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide.

Additional Information

Gene ID	858
Other Names	Caveolin-2, CAV2
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CAV2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CAV2
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 (By similarity).
Cellular Location	Nucleus. Cytoplasm. Golgi apparatus membrane; Peripheral membrane protein. Cell membrane; Peripheral membrane protein. Membrane, caveola; Peripheral membrane protein. Note=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.
Tissue Location	Expressed in endothelial cells, smooth muscle cells, skeletal myoblasts and fibroblasts

References

1. Int J Oncol. 2011 May;38(5):1395-402.2. Breast Cancer Res Treat. 2008 Jul;110(2):245-56.

Images

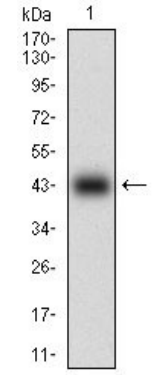


Figure 1: Western blot analysis using CAV2 mAb against human CAV2 (AA: 1-86) recombinant protein. (Expected MW is 35.9 kDa)

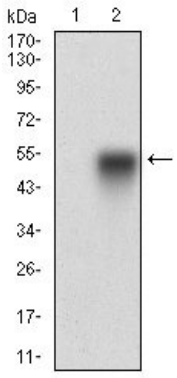
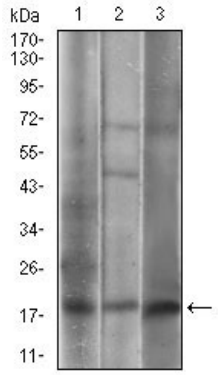


Figure 2: Western blot analysis using CAV2 mAb against HEK293 (1) and CAV2 (AA: 1-86)-hIgGFc transfected HEK293 (2) cell lysate.

Figure 3: Western blot analysis using CAV2 mouse mAb against A549 (1), 3T3-L1 (2), A431 (3) cell lysate.



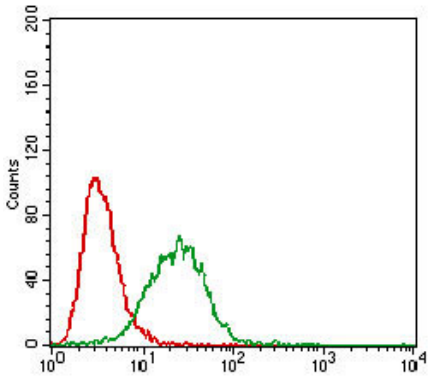


Figure 4: Flow cytometric analysis of A549 cells using CAV2 mouse mAb (green) and negative control (red).

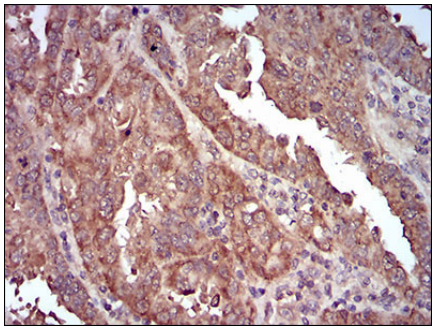


Figure 5: Immunohistochemical analysis of paraffin-embedded endometrial cancer tissues using CAV2 mouse mAb with DAB staining.

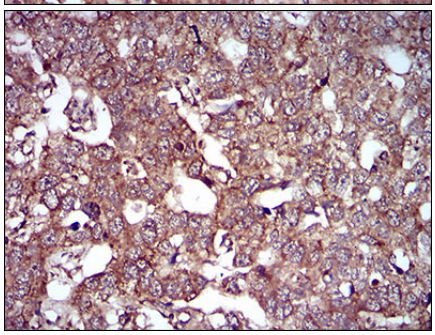


Figure 6: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using CAV2 mouse mAb with DAB staining.