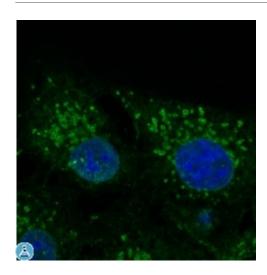


## Anti-CAV2 antibody



**Description** Goat polyclonal to Caveolin- 2 ,Äì caveolae marker. This scaffolding

protein acts as an accessory protein in conjunction with CAV1 in targeting to lipid rafts and driving caveolae formation. It is involved in essential cellular functions, including cellular growth control, apoptosis, lipid metabolism and signal transduction. CAV2 might function as a tumor

suppressor as well.

Model STJ140020

**Host** Goat

**Reactivity** Avian, Bovine, Canine, Donkey, Feline, Goat, Guinea Pig, Hamster, Horse,

Human, Mouse, Other, Porcine, Rabbit, Rat, Sheep, Simian

**Applications** IF, IHC, WB

**Immunogen** Recombinant peptide derived from within residues 50 aa to the N-terminus of

human CAV2 produced in E. coli.

Immunogen Region N-Term

**Gene ID** 858

Gene Symbol <u>CAV2</u>

**Dilution range** Western blot 1:500-1:2,000 Immunofluorescence 1:50-1:200

Immunohistochemistry (paraffin) 1:200-1:1,000 Immunohistochemistry

(frozen) 1:200-1:1,000

Tissue Specificity Expressed in endothelial cells, smooth muscle cells, skeletal myoblasts and

fibroblasts...

**Purification** This antibody is epitope-affinity purified from goat antiserum.

**Note** For research use only (RUO).

**Protein Name** Caveolin-2

Molecular Weight 19 kDa

**Clonality** Polyclonal

**Conjugation** Unconjugated

**Isotype** IgG

**Formulation** PBS, 20% glycerol and 0.05% sodium azide.

**Concentration** 2 mg/mL

**Storage Instruction** Store at -20°, and avoid repeated freeze-thaw cycles.

Database Links <u>HGNC:1528OMIM:601048</u>

**Alternative Names** Caveolin-2

**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 insulinstimulated nuclear translocation and activation of MAPK1 and STAT3, and the subsequent regulation of cell cycle progression . {ECO:0000250, ECO:0000269|PubMed:15504032, ECO:0000269|PubMed:18081315}.

Cellular Localization Nucleus. Cytoplasm. Golgi apparatus membrane. Peripheral membrane

protein. Cell membrane. Peripheral membrane protein. Membrane, caveola.

Peripheral membrane protein. 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 . 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. .

**Post-translational** Phosphorylated on serine and tyrosine residues. CAV1 promotes

phosphorylation on Ser-23 which then targets the complex to the plasma membrane, lipid rafts and caveolae. Phosphorylation on Ser-36 appears to modulate mitosis in endothelial cells . Phosphorylation on both Tyr-19 and Tyr-27 is required for insulin-induced 'Ser-727' phosphorylation of STAT3 and its activation. Phosphorylation on Tyr-19 is required for insulin-induced

phosphorylation of MAPK1 and DNA binding of STAT3. Tyrosine phosphorylation is induced by both EGF and insulin . {ECO:0000250}.

**Modifications**