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Rabbit Anti-Caveolin-2 antibody

SL10224R

Product Name	Caveolin-2
Chinese Name	细胞质膜微囊蛋白-2 抗体
Alias	CAV; CAV2; CAV2_HUMAN; Caveolae protein 20 kD; Caveolin 2; Caveolin2; Caveolin 2 isoform a and b; Caveolin 2 isoform c; Caveolin-2; MGC12294.
Research Area	Cardiovascular Cell biology Signal transduction Apoptosis
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	(predicted: Human, Mouse, Rat, Dog, Pig, Cow, Horse,)
Applications	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	18kDa
Cellular localization	The nucleus cytoplasmic The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human Caveolin-2: 81-162/162
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed
Product	May act as a scaffolding protein within caveolar membranes. Interacts directly with G-protein

Detail

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.

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.

Subunit:
Monomer or homodimer.

Subcellular Location:
Nucleus. Cytoplasm. Golgi apparatus membrane; Peripheral membrane protein. Cell membrane; Peripheral membrane protein. Membrane, caveola; Peripheral membrane protein.

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

Post-translational modifications:
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 (By similarity). 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.

Similarity:
Belongs to the caveolin family.

SWISS:
P51636

Gene ID:
858

Database links:

Entrez Gene: 858 Human

Entrez Gene: 12390 Mouse

Entrez Gene: 100362824 Rat

Entrez Gene: 363425 Rat

Omim: 601048 Human

SwissProt: O46550 Dog

SwissProt: P51636 Human

SwissProt: Q9WVC3 Mouse

SwissProt: Q2IBC5 Rat

Unigene: 212332 Human

Unigene: 603096 Human

Unigene: 396075 Mouse

Unigene: 81070 Rat