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Phospho-CAV1(Y14) Antibody Blocking peptide

Synthetic peptide
Catalog # BP3549a

Specification

Phospho-CAV1(Y14) Antibody Blocking peptide - Product Information

Primary Accession Q03135

Phospho-CAV1(Y14) Antibody Blocking peptide - Additional Information

Gene ID 857

Other Names
Caveolin-1, CAV1, CAV

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP3549a was selected from the region of human Phospho-CAV1-pY14. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Phospho-CAV1(Y14) Antibody Blocking peptide - 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).

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

Phospho-CAV1(Y14) Antibody Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Phospho-CAV1(Y14) Antibody Blocking peptide - Images

Phospho-CAV1(Y14) Antibody Blocking peptide - Background

The scaffolding protein CAV1 is the main component of the caveolae plasma membranes found in most cell types. This 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 CAV1 gene is a tumor suppressor gene candidate and a negative regulator of the Ras-p42/44 MAP kinase cascade.

Phospho-CAV1(Y14) Antibody Blocking peptide - References

Smith,J.L.,J. Virol. 82 (19), 9505-9512 (2008)Zhong,Y., J. Neurosci. 28 (31), 7788-7796 (2008)Di Vizio,D., Cell Cycle 7 (14), 2257-2267 (2008)Lee,H., J. Biol. Chem. 276 (37), 35150-35158 (2001)Schlegel,A., J. Biol. Chem. 276 (6), 4398-4408 (2001)