

Product datasheet

Mouse Caveolin-2 peptide ab4962

Overview

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**Product name** Mouse Caveolin-2 peptide

Description

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**Nature** Synthetic

**Amino Acid Sequence**

**Accession** [Q9WVC3](#)

**Species** Mouse

**Sequence** MADDAYpSHHSGC

**Amino acids** 14 to 24

Specifications

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Our [Abpromise guarantee](#) covers the use of **ab4962** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

**Applications** Blocking

**Form** Liquid

Additional notes

This peptide may be used for neutralization and control experiments with the polyclonal antibody that reacts with phospho caveolin-2, catalog [ab3417](#). Using a solution of peptide of equal volume and concentration to the corresponding antibody will yield a large molar excess of peptide (~ 70-fold) for competitive inhibition of antibody-protein binding reactions.

Preparation and Storage

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**Stability and Storage** Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

General Info

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**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.

**Tissue specificity**

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

**Sequence similarities**

Belongs to the caveolin family.

**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.

**Cellular localization**

Nucleus. Cytoplasm. Golgi apparatus membrane. Cell membrane. Membrane > caveola. 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.

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