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PICK1 (PRKCABP) Antibody (N-term) Blocking peptide

Synthetic peptide
Catalog # BP7078a

Specification

PICK1 (PRKCABP) Antibody (N-term) Blocking peptide - Product Information

Primary Accession Q9NRD5

PICK1 (PRKCABP) Antibody (N-term) Blocking peptide - Additional Information

Gene ID 9463

Other Names
PRKCA-binding protein, Protein interacting with C kinase 1, Protein kinase C-alpha-binding protein, PICK1, PRKCABP

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7078a was selected from the N-term region of human PRKCABP. 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.

PICK1 (PRKCABP) Antibody (N-term) Blocking peptide - Protein Information

Name PICK1

Synonyms PRKCABP

Function
Probable adapter protein that bind to and organize the subcellular localization of a variety of membrane proteins containing some PDZ recognition sequence. Involved in the clustering of various receptors, possibly by acting at the receptor internalization level. Plays a role in synaptic plasticity by regulating the trafficking and internalization of AMPA receptors. May be regulated upon PRKCA activation. May regulate ASIC1/ASIC3 channel. Regulates actin polymerization by inhibiting the actin-nucleating activity of the Arp2/3 complex; the function is competitive with nucleation promoting factors and is linked to neuronal morphology regulation and AMPA receptor (AMPAR) endocytosis. Via interaction with the Arp2/3 complex involved in regulation of synaptic plasicity of excitatory synapses and required for spine shrinkage during long-term depression

(LTD). Involved in regulation of astrocyte morphology, antagonistic to Arp2/3 complex activator WASL/N-WASP function.

Cellular Location
Cytoplasm, perinuclear region. Membrane; Peripheral membrane protein. Membrane; Lipid-anchor. Postsynaptic density. Synapse, synaptosome. Cytoplasm, cytoskeleton. Note=Also membrane-associated, present at excitatory synapses.

Tissue Location
Ubiquitous.

PICK1 (PRKCABP) Antibody (N-term) Blocking peptide - Protocols

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

- Blocking Peptides

PICK1 (PRKCABP) Antibody (N-term) Blocking peptide - Images

PICK1 (PRKCABP) Antibody (N-term) Blocking peptide - Background

PDZ domain, but not the AH domain, of PICK1 interacts with the C termini of the GTP-bound forms of ADP-ribosylation factor-1 (ARF1) and ARF3. The interactions with ARF5 and ARF6 are weak, suggesting that the PICK1 interaction is specific for class I ARFs and that it may regulate Golgi-to-endoplasmic reticulum vesicle transport. The PDZ domain of rat Pick1 interacts with the last 10 amino acids of the short C-terminal alternative splice variants of AMPA receptor subunits. It has thus been proposed that E-S-V/I-K-I, a sequence found in these 10 amino acids, is a novel PDZ-binding motif. PRKCA phosphorylates Pick1 efficiently but binds Pick1 in both the phosphorylated and unphosphorylated states. Consistent with a neuronal role for PICK1, the mouse homolog interacts with mouse AMPA glutamate receptors and colocalizes at excitatory synapses in the brain. Metabotropic glutamate receptor-7 (mGluR7) localizes specifically to presynaptic active zones. The extreme C-terminal 3 amino acids of mGluR7 have been shown to interact with the PDZ domain of PICK1. Immunofluorescence microscopy demonstrated that both proteins are localized at excitatory synapses in hippocampal neurons, with clustering of mGluR7 at synapses requires PICK1 C-terminal PDZ-binding residues. Mutant mGluR7 lacking the PDZ-binding residues localized diffusely along axons rather than at the synapse, suggesting a role for Pick1 as a scaffolding molecule at presynaptic sites.