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PICK1 (PRKCABP) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7078B

Product Information

Application	WB, E
Primary Accession	Q9NRD5
Other Accession	Q9EP80, Q62083, Q4R7Q5, Q2T9M1
Reactivity	Human, Mouse
Predicted	Bovine, Monkey, Rat, Canine, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	46600
Antigen Region	286-316

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	This PICK1 (PRKCABP) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 286-316 amino acids from the C-terminal region of human PICK1 (PRKCABP).
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PICK1 (PRKCABP) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

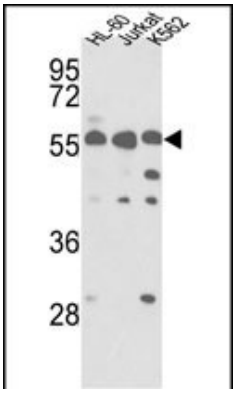
Name	PICK1
Synonyms	PRKCABP
Function	Probable adapter protein that bind to and organize the subcellular

	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 {ECO:0000250|UniProtKB:Q9EP80}. Membrane {ECO:0000250|UniProtKB:Q9EP80}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q9EP80}. Membrane {ECO:0000250|UniProtKB:Q62083}; Lipid-anchor {ECO:0000250|UniProtKB:Q62083}. Postsynaptic density {ECO:0000250|UniProtKB:Q9EP80}. Synapse, synaptosome {ECO:0000250|UniProtKB:Q9EP80}. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q9EP80}. Note=Also membrane-associated, present at excitatory synapses. {ECO:0000250|UniProtKB:Q9EP80}
Tissue Location	Ubiquitous.

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.

Images



Western blot analysis of hPRKCABP-C300 (Cat.#AP7078b) in HL-60, Jurkat, K562 cell line lysates (35ug/lane). PRKCABP (arrow) was detected using the purified Pab.

Citations

- PDZ protein mediated activity-dependent LTP/LTD developmental switch at rat retinocollicular synapses.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.