

INPP4A Rabbit pAb

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Catalog # AP56354

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q96PE3
Predicted	Rat, Pig, Dog, Human, Mouse, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	109956
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human INPP4A
Epitope Specificity	151-250/977
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The inositol polyphosphate 4-phosphatases selectively remove the phosphate from the 4-position of various phosphatidylinositols, which generate second messengers in response to extracellular signals. Both the type I and type II 4-phosphatases catalyze the hydrolysis of phosphatidylinositol 3,4-bisphosphate, inositol 1,3,4-trisphosphate, and inositol 3,4-bisphosphate. Type I and type II 4-phosphatases are both alternatively spliced into two isoforms, a and b, which have been detected in human platelets, rat brain, heart, skeletal muscle and spleen; and all isoforms contain a conserved motif CKSAKDRT, which contains the active site consensus sequence C-X5-R. Both type I and II 4-phosphatases are thought to regulate the level of intracellular calcium by acting as signal terminating enzymes.

Additional Information

Gene ID	3631
Other Names	Inositol polyphosphate-4-phosphatase type I A {ECO:0000312 HGNC:HGNC:6074}, Inositol polyphosphate 4-phosphatase type I, Type I inositol 3, 4-bisphosphate 4-phosphatase, 3.1.3.66, INPP4A
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	INPP4A
Function	Catalyzes the hydrolysis of the 4-position phosphate of phosphatidylinositol 3,4-bisphosphate (PtdIns(3,4)P ₂) (PubMed: 15716355 , PubMed: 20463662). Also catalyzes inositol 1,3,4-trisphosphate and inositol 1,4-bisphosphate (By similarity). Antagonizes the PI3K-AKT/PKB signaling pathway by dephosphorylating phosphoinositides and thereby modulating cell cycle progression and cell survival (By similarity) (PubMed: 30071275). May protect neurons from excitotoxic cell death by regulating the synaptic localization of cell surface N-methyl-D- aspartate-type glutamate receptors (NMDARs) and NMDAR-mediated excitatory postsynaptic current (By similarity).
Cellular Location	Early endosome membrane. Recycling endosome membrane. Cell membrane. Nucleus Cytoplasm. Postsynaptic density {ECO:0000250 UniProtKB:Q9EPW0}. Note=Translocates to the plasma membrane upon EGF stimulation (PubMed:15716355). Shuttles between the cytoplasm and the nucleus, depending on the cell cycle stage, with highest amounts detected in the nucleus during the G0/G1phase (PubMed:30071275).
Tissue Location	Isoform 1 is expressed in the platelets, MEG-01 megakaryocytes and Jurkat T-cells. Isoform 2 is expressed in the brain

Background

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