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PAP2B Rabbit pAb

Catalog # AP99961

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	O14495
Other Accession	O14495
Reactivity	Mouse
Predicted	Pig, Human, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	35116
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PAP2B
Epitope Specificity	241-311/311
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the PA-phosphatase related phosphoesterase family.
SUBUNIT	Homodimer. This complex seems not to be involved in substrate recognition, it may confer only structural or functional stability.
Post-translational modifications	N-glycosylated. Contains high-mannose oligosaccharides.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Phosphatidic acid phosphatase type 2b (PPAP2b) is a member of the phosphatidic acid phosphatase (PAP) family that function in de novo synthesis of glycerolipids as well as in receptor activated signal transduction mediated by phospholipase D. PAP2b catalyzes the conversion of phosphatidic acid to diacylglycerol and hydrolyzes lysophosphatidic acid, ceramide-1-phosphate and sphingosine-1-phosphate. It is a homodimer glycoprotein localized at the cell plasma membrane. Expression promotes adhesion, spreading, and tyrosine phosphorylation of Fak, Shc, Cas and paxillin in endothelial cells. PAP2b induced cell-cell interactions regulate specific intracellular signaling pathways that involve p120-catenin, Fak, Akt, and GSK3? protein kinases.

Additional Information

Gene ID	8613
Other Names	Dri42; LPP3; PAP2B; PPAP2B; VCIP; 1110003O22Rik; 2610002D05Rik; D4Bwg0538e; D4Bwg1535e; PRG-2; Ppab2b; PLPP3_HUMAN; PLPP3; Lipid phosphate phosphohydrolase 3; PAP2-beta; Phosphatidate phosphohydrolase type 2b; Phosphatidic acid phosphatase 2b (PAP-2b | PAP2b); Vascular endothelial growth factor and type I collagen-inducible protein (VCIP); 3.1.3.-; 3.1.3.4; PLPP3_MOUSE; PLPP3_RAT; Differentially expressed in rat intestine 42

	(Dri42); phospholipid phosphatase 3; phosphatidic acid phosphatase type 2B
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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	PLPP3 (HGNC:9229)
Synonyms	LPP3, PPAP2B
Function	Magnesium-independent phospholipid phosphatase of the plasma membrane that catalyzes the dephosphorylation of a variety of glycerolipid and sphingolipid phosphate esters including phosphatidate/PA, lysophosphatidate/LPA, diacylglycerol pyrophosphate/DGPP, sphingosine 1-phosphate/S1P and ceramide 1- phosphate/C1P (PubMed:27694435, PubMed:9607309, PubMed:9705349). Also acts on N-oleoyl ethanolamine phosphate/N-(9Z-octadecenoyl)- ethanolamine phosphate, a potential physiological compound (PubMed:9607309). Has both an extracellular and an intracellular phosphatase activity, allowing the hydrolysis and the cellular uptake of these bioactive lipid mediators from the milieu, regulating signal transduction in different cellular processes (PubMed:23591818, PubMed:27694435, PubMed:9607309). Through the dephosphorylation of extracellular sphingosine-1-phosphate and the regulation of its extra- and intracellular availability, plays a role in vascular homeostasis, regulating endothelial cell migration, adhesion, survival, proliferation and the production of pro-inflammatory cytokines (PubMed:27694435). By maintaining the appropriate levels of this lipid in the cerebellum, also ensure its proper development and function (By similarity). Through its intracellular lipid phosphatase activity may act in early compartments of the secretory pathway, regulating the formation of Golgi to endoplasmic reticulum retrograde transport carriers (PubMed:23591818).
Cellular Location	Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P97544}. Basolateral cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P97544}. Endoplasmic reticulum membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P97544}. Endoplasmic reticulum-Golgi intermediate compartment membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P97544}. Golgi apparatus membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P97544}. Golgi apparatus, trans-Golgi network membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P97544}. Membrane raft; Multi-pass membrane protein {ECO:0000250|UniProtKB:P97544}. Note=Cycles between the endoplasmic reticulum and the Golgi.
Tissue Location	Ubiquitously expressed (PubMed:12660161, PubMed:9305923). Highly expressed in heart and placenta (PubMed:9305923).

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