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PCYT1A Rabbit pAb

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Catalog # AP94840

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P49585
Reactivity	Human, Mouse, Rat
Predicted	Dog, Pig, Horse, Rabbit, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	41731
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PCYT1A
Epitope Specificity	201-300/367
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm; cytosol. Membrane. It can interconvert between an inactive cytosolic form and an active membrane-bound form.
SIMILARITY	Belongs to the cytidylyltransferase family.
SUBUNIT	Homodimer.
Post-translational modifications	The serine residues of the C-terminus are phosphorylated. The inactive soluble form is stabilized by phosphorylation, the active membrane bound form is promoted by anionic lipids or diacylglycerol, and is stabilized by dephosphorylation.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Additional Information

Gene ID	5130
Other Names	Choline-phosphate cytidylyltransferase A, 2.7.7.15, CCT-alpha, CTP:phosphocholine cytidylyltransferase A, CCT A, CT A, Phosphorylcholine transferase A, PCYT1A, CTPCT, PCYT1
Target/Specificity	Cancer,Neurotrophins,Lipid metabolism
Dilution	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.

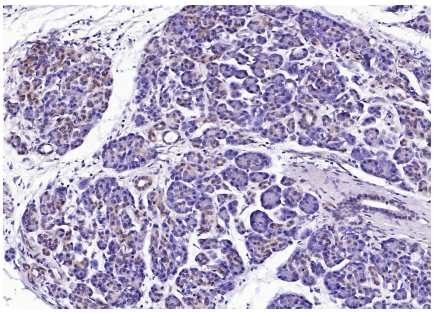
Protein Information

Name	PCYT1A
Synonyms	CTPCT, PCYT1
Function	Catalyzes the key rate-limiting step in the CDP-choline pathway for phosphatidylcholine biosynthesis.
Cellular Location	Cytoplasm, cytosol {ECO:0000250|UniProtKB:P19836}. Membrane {ECO:0000250|UniProtKB:P19836}; Peripheral membrane protein {ECO:0000250|UniProtKB:P19836}. Endoplasmic reticulum membrane; Peripheral membrane protein {ECO:0000250|UniProtKB:P19836}. Nucleus Note=It can interconvert between an inactive cytosolic form and an active membrane-bound form. {ECO:0000250|UniProtKB:P19836}
Tissue Location	Brain, placenta, liver, fetal and adult lung.

Background

Increase in fetal surfactant synthesis and lung maturity is caused by the glucocorticoidal induction of enzymes required for phosphatidylcholine synthesis towards the end of gestation (1). The regulation of gestational age-dependent induction of phosphatidylcholine synthesis by glucocorticoids is still unclear (1). The rate-controlling enzyme in the phosphatidylcholine biosynthetic pathway is CTP-phosphocholine cytidylyltransferase A (CCT A) (2–4). In cultured eukaryotic cells, this enzyme is essential for survival (3). The alpha isoform is located in the nucleus and is regulated by reversible phosphorylation and membrane association (3). There is significant identity between the alpha-helical membrane-binding domains of CCT A and soybean oleosin (2). Expressed CCT A has lipid-dependent cytidylyltransferase activity (5). The gene which encodes CCT A maps to human chromosome 3q (4).

Images



Paraformaldehyde-fixed, paraffin embedded (human pancreatic cancer); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PCYT1A) Polyclonal Antibody, Unconjugated (AP94840) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.