10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CDIPT Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9044c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	O14735
Other Accession	P70500, Q8VDP6
Reactivity	Human, Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB23123
Calculated MW	23539
Antigen Region	99-125

Additional Information

Gene ID	10423
Other Names	CDP-diacylglycerol--inositol 3-phosphatidyltransferase, Phosphatidylinositol synthase, PI synthase, PtdIns synthase, CDIPT, PIS, PIS1
Target/Specificity	This CDIPT antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 99-125 amino acids from the Central region of human CDIPT.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	CDIPT Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CDIPT (HGNC:1769)
Synonyms	PIS, PIS1

Function	Catalyzes the biosynthesis of phosphatidylinositol (PtdIns) as well as PtdIns:inositol exchange reaction. May thus act to reduce an excessive cellular PtdIns content. The exchange activity is due to the reverse reaction of PtdIns synthase and is dependent on CMP, which is tightly bound to the enzyme.
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein
Tissue Location	Detected in placenta (at protein level). Widely expressed. Higher expression in adult liver and skeletal muscle, slightly lower levels seen in pancreas, kidney, lung, placenta, brain, heart, leukocyte, colon, small intestine, ovary, testis, prostate, thymus and spleen. In fetus, expressed in kidney, liver, lung and brain.

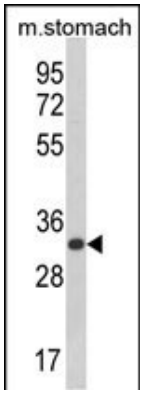
Background

CDIPT is a protein which is phosphatidylinositol breakdown products that are ubiquitous second messengers that function downstream of many G protein-coupled receptors and tyrosine kinases regulating cell growth, calcium metabolism, and protein kinase C activity. Two enzymes, CDP-diacylglycerol synthase and phosphatidylinositol synthase, are involved in the biosynthesis of phosphatidylinositol. Phosphatidylinositol synthase, a member of the CDP-alcohol phosphatidyl transferase class-I family, is an integral membrane protein found on the cytoplasmic side of the endoplasmic reticulum and the Golgi apparatus.

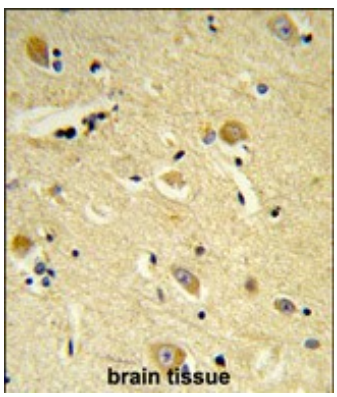
References

de Serres,F.J., et.al., Monaldi Arch Chest Dis 63 (3), 133-141 (2005)
Lykidis,A., et.al., J. Biol. Chem. 272 (52), 33402-33409 (1997)

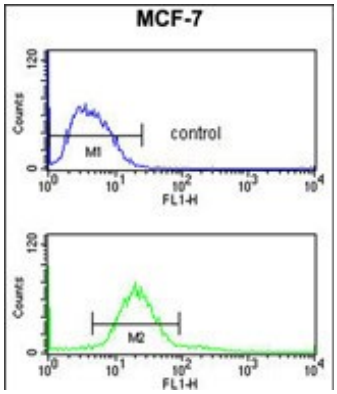
Images



Western blot analysis of CDIPT Antibody (Center) (Cat. #AP9044c) in mouse stomach tissue lysates (35ug/lane). CDIPT (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human brain tissue reacted with CDIPT Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



CDIPT Antibody (Center) (Cat. #AP9044c) flow cytometry analysis of MCF-7 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.