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CDS2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17134c

Product Information

Application	WB, E
Primary Accession	O95674
Other Accession	Q91XU8, Q99L43, A0JNC1, NP_003809.1
Reactivity	Human
Predicted	Bovine, Mouse, Rat, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB37301
Calculated MW	51418
Antigen Region	138-165

Additional Information

Gene ID	8760
Other Names	Phosphatidate cytidylyltransferase 2, CDP-DAG synthase 2, CDP-DG synthase 2, CDP-diacylglycerol synthase 2, CDS 2, CDP-diglyceride pyrophosphorylase 2, CDP-diglyceride synthase 2, CTP:phosphatidate cytidylyltransferase 2, CDS2
Target/Specificity	This CDS2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 138-165 amino acids from the Central region of human CDS2.
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 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	CDS2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CDS2 (HGNC:1801)
Function	Catalyzes the conversion of phosphatidic acid (PA) to CDP- diacylglycerol

	(CDP-DAG), an essential intermediate in the synthesis of phosphatidylglycerol, cardiolipin and phosphatidylinositol (PubMed:25375833). Exhibits specificity for the nature of the acyl chains at the sn-1 and sn-2 positions in the substrate, PA and the preferred acyl chain composition is 1-stearoyl-2-arachidonoyl-sn- phosphatidic acid (PubMed:25375833). Plays an important role in regulating the growth and maturation of lipid droplets which are storage organelles at the center of lipid and energy homeostasis (PubMed:26946540, PubMed:31548309).
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein
Tissue Location	Widely expressed. Expressed in heart, brain and retina, and to a lesser extent in placenta, lung, liver, skeletal muscle, kidney and pancreas.

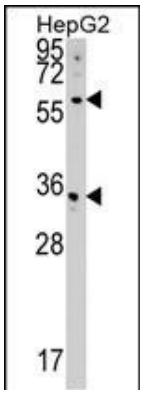
Background

Breakdown products of phosphoinositides 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. This gene encodes an enzyme which regulates the amount of phosphatidylinositol available for signaling by catalyzing the conversion of phosphatidic acid to CDP-diacylglycerol. This enzyme is an integral membrane protein localized to two subcellular domains, the matrix side of the inner mitochondrial membrane where it is thought to be involved in the synthesis of phosphatidylglycerol and cardiolipin and the cytoplasmic side of the endoplasmic reticulum where it functions in phosphatidylinositol biosynthesis. Two genes encoding this enzyme have been identified in humans, one mapping to human chromosome 4q21 and a second to 20p13.

References

Bailey, S.D., et al. Diabetes Care (2010) In press :
Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)
Olsen, J.V., et al. Cell 127(3):635-648(2006)
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Images



CDS2 Antibody (Center) (Cat. #AP17134c) western blot analysis in HepG2 cell line lysates (35ug/lane).This demonstrates the CDS2 antibody detected the CDS2 protein (arrow).

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