

**CDS2 Antibody (Center) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP17134c****Specification**

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**CDS2 Antibody (Center) Blocking Peptide - Product Information**Primary Accession [O95674](#)**CDS2 Antibody (Center) Blocking Peptide - 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

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**CDS2 Antibody (Center) Blocking Peptide - 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:<a href="http://www.uniprot.org/citations/25375833" target="\_blank">25375833</a>). 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:<a href="http://www.uniprot.org/citations/25375833" target="\_blank">25375833</a>). 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:<a href="http://www.uniprot.org/citations/26946540" target="\_blank">26946540</a>, PubMed:<a href="http://www.uniprot.org/citations/31548309" target="\_blank">31548309</a>).

**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.

### **CDS2 Antibody (Center) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

### **CDS2 Antibody (Center) Blocking Peptide - Images**

### **CDS2 Antibody (Center) Blocking Peptide - Background**

Breakdown products of phosphoinositides are ubiquitous second messengers that function downstream of many Gprotein-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.

### **CDS2 Antibody (Center) Blocking Peptide - 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) Olsen, J.V., et al. Cell 127(3):635-648(2006)