

CDS1 Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP10750a**Specification**

CDS1 Antibody (N-term) Blocking peptide - Product InformationPrimary Accession [Q92903](#)**CDS1 Antibody (N-term) Blocking peptide - Additional Information****Gene ID** 1040**Other Names**

Phosphatidate cytidylyltransferase 1, CDP-DAG synthase 1, CDP-DG synthase 1, CDP-diacylglycerol synthase 1, CDS 1, CDP-diglyceride pyrophosphorylase 1, CDP-diglyceride synthase 1, CTP:phosphatidate cytidylyltransferase 1, CDS1, CDS

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.

CDS1 Antibody (N-term) Blocking peptide - Protein Information**Name** CDS1 ([HGNC:1800](#))**Synonyms** CDS**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:9407135, PubMed:25375833). Exhibits almost no acyl chain preference for PA, showing no discrimination for the sn-1/sn-2 acyl chain composition of PAs (PubMed:25375833). Plays an important role in regulating the growth of lipid droplets which are storage organelles at the center of lipid and energy homeostasis (PubMed:26946540, PubMed:31548309). Positively regulates the differentiation and development of adipocytes (By similarity).

Cellular Location

Endoplasmic reticulum membrane; Multi-pass membrane protein

Tissue Location

Expressed in adult tissues such as placenta, brain, small intestine, ovary, testis and prostate.
Highly expressed in fetal kidney, lung and brain. Lower level in fetal liver

CDS1 Antibody (N-term) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

CDS1 Antibody (N-term) Blocking peptide - Images**CDS1 Antibody (N-term) Blocking peptide - 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.

CDS1 Antibody (N-term) Blocking peptide - References

Bailey, S.D., et al. Diabetes Care (2010) In press : Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009) Volik, S., et al. Genome Res. 16(3):394-404(2006) Volta, M., et al. Genomics 55(1):68-77(1999) Halford, S., et al. Genomics 54(1):140-144(1998)