

# Recombinant Human CDS1

**Cat. No.** CDS1-27913TH **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <b>Product Overview</b> | Recombinant fragment: MLELRHRGSC PGPREAVSPP HREGAAGGD HETESTSDKE TDIDDRYGDL DSRTDSDIPE IPPSSDRTPE ILKKALSGLS SRWKNWWIRG ILTLMIS of Human CDS1 (amino acids 1-98) with N terminal proprietary tag, 36.41 kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Source</b>           | Wheat Germ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>ProteinLength</b>    | 98 amino acids                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Description</b>      | <p>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.</p> <p>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.</p> |
| <b>Molecular Weight</b> | 36.410kDa inclusive of tags                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tissue specificity</b>       | 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. |
| <b>Form</b>                     | Liquid                                                                                                                                                                         |
| <b>Purity</b>                   | Proprietary Purification                                                                                                                                                       |
| <b>Storage buffer</b>           | pH: 8.00 Constituents: 0.3% Glutathione, 0.79% Tris HCl                                                                                                                        |
| <b>Storage</b>                  | Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.                                                                                      |
| <b>Sequences of amino acids</b> | MLELRHRGSCPGPREAVSPPHREGAAGGDHETESTSDKETDIDDRYGDLDSTRD<br>SDIPEIPPSSDRTPEILKKALSGLSRWKNWWIRGILTLTMIS                                                                           |
| <b>Sequence Similarities</b>    | Belongs to the CDS family.                                                                                                                                                     |

## GENE INFORMATION

|                        |                                                                                                             |
|------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | <a href="#">CDS1 CDP-diacylglycerol synthase (phosphatidate cytidyltransferase) 1 [ Homo sapiens ]</a>      |
| <b>Official Symbol</b> | <a href="#">CDS1</a>                                                                                        |
| <b>Synonyms</b>        | CDS1; CDP-diacylglycerol synthase (phosphatidate cytidyltransferase) 1; phosphatidate cytidyltransferase 1; |
| <b>Gene ID</b>         | <a href="#">1040</a>                                                                                        |
| <b>mRNA Refseq</b>     | <a href="#">NM_001263</a>                                                                                   |

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|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Protein Refseq</b>      | NP_001254                                                                                                                                                                                                                                                                                          |
| <b>MIM</b>                 | 603548                                                                                                                                                                                                                                                                                             |
| <b>Uniprot ID</b>          | Q92903                                                                                                                                                                                                                                                                                             |
| <b>Chromosome Location</b> | 4q21                                                                                                                                                                                                                                                                                               |
| <b>Pathway</b>             | Glycerophospholipid metabolism, organism-specific biosystem; Glycerophospholipid metabolism, conserved biosystem; Metabolic pathways, organism-specific biosystem; Phosphatidylinositol signaling system, organism-specific biosystem; Phosphatidylinositol signaling system, conserved biosystem; |
| <b>Function</b>            | diacylglycerol cholinephosphotransferase activity; nucleotidyltransferase activity; phosphatidate cytidyltransferase activity;                                                                                                                                                                     |

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