

2-C-methyl-D-erythritol 4-phosphate cytidyltransferase, chloroplastic (ISPD), Recombinant Protein

Cat *RP01028*

Size 0.02 mg (E-Coli)/ 0.1 mg (E-Coli)/ 0.02 mg (Yeast)/ 0.1 mg
(Yeast)/ 0.02 mg (Baculovirus)/ 0.02 mg (Mammalian-Cell)/ 1

mg (E-Coli)/ 0.1 mg (Baculovirus)/ 1 mg (Yeast)/ 0.1 mg
(Mammalian-Cell)/ 1 mg (Baculovirus)/ 0.5 mg (Mammalian-
Arabidopsis thaliana (Mouse-ear cress)
Cell)

Species

Full Product Name

Recombinant Arabidopsis thaliana 2-C-methyl-D-erythritol 4-phosphate cytidyltransferase, chloroplastic (ISPD)

Product Gene Name

ISPD recombinant protein

Purity

Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)

Sequence

SSSTGFDNSN VVVKEKSVSV ILLAGGQGKR MKMSMPKQYI PLLGQPIALY SFFTFSRMPE VKEIVVCDP
FFRDIFEEYE ESIDVDLRFA IPGKERQDSV YSGLQEIDVN SELVCIHDSA RPLVNTEDVE KVLKDGSAGV
AAVLGVPAKA TIKEVNSDSL VVKTLDRKTL WEMQTPQVIK PELLKKGFEV VKSEGLEVTD DVSIVEYLKH
PVYVSQGSYT NIKVTTPDDL LLAERILSED S

Sequence Positions

62-302, Full length protein

Format

Lyophilized or liquid (Format to be determined during the manufacturing process)

Host

E Coli or Yeast or Baculovirus or Mammalian Cell

Molecular Weight

33,937 Da

Storage

Store at -20°C. For long-term storage, store at -20°C or -80°C. Store working aliquots at 4°C for up to one week.
Repeated freezing and thawing is not recommended.

Protein Family

2-C-methyl-D-erythritol 4-phosphate cytidyltransferase

NCBI Accession

NP_001325418.1

NCBI GI

1063699670

NCBI GenBank Nucleotide

NM_001335124.1

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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Size 0.02 mg (E-Coli)/ 0.1 mg (E-Coli)/ 0.02 mg (Yeast)/ 0.1 mg (Yeast)/ 0.02 mg (Baculovirus)/ 0.02 mg (Mammalian-Cell)/ 1 mg (E-Coli)/ 0.1 mg (Baculovirus)/ 1 mg (Yeast)/ 0.1 mg (Mammalian-Cell)/ 1 mg (Baculovirus)/ 0.5 mg (Mammalian-Cell)

NCBI GeneID

814779

NCBI Official Full Name

Nucleotide-diphospho-sugar transferases superfamily protein

NCBI Official Symbol

ISPD

NCBI Official Synonym Symbols

2-C-METHYL-D-ERYTHRITOL 4-PHOSPHATE CYTIDYLTRANSFERASE; 4-DIPHOSPHOCYTIDYL-2C-METHYL-D-ERYTHRITOL SYNTHASE; ATMEPCT; MCT; T8K22.20; T8K22_20

NCBI Protein Information

Nucleotide-diphospho-sugar transferases superfamily protein

NCBI Summary

Encodes a protein with 4-Diphosphocytidyl-2C-methyl-D-erythritol synthase activity. The enzyme has an absolute requirement for divalent cations (Mg²⁺ reaches the highest catalytic activity).

UniProt Gene Name

ISPD

UniProt Synonym Gene Names

MCT; MECT; MEPCT; AtMECT; AtMEPCT

UniProt Protein Name

2-C-methyl-D-erythritol 4-phosphate cytidyltransferase, chloroplastic

UniProt Synonym Protein Names

4-diphosphocytidyl-2C-methyl-D-erythritol synthase; MEP cytidyltransferase; AtMECT; AtMEPCT

UniProt Primary Accession

P69834

UniProt Secondary Accession

O64726; Q9LL91

UniProt Related Accession

P69834

UniProt Comments

Enzyme of the plastid non-mevalonate pathway for isoprenoid biosynthesis that catalyzes the formation of 4-diphosphocytidyl-2C-methyl-D-erythritol from CTP and 2-C-methyl-D-erythritol 4-phosphate (MEP). Is essential for chloroplast development and required for pigments and gibberellins biosynthesis.

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