

Probable 1-deoxy-D-xylulose-5-phosphate synthase, chloroplastic (CLA1), Recombinant Protein

Cat RP02295

Size 0.5 mg (E-Coli)/ 0.05 mg (Baculovirus)/ 0.5 mg (Yeast)/ 0.05 mg (Mammalian-Cell)/ 1 mg (E-Coli)/ 0.1 mg (Baculovirus)/ 1 mg

(Yeast)/ 0.1 mg (Mammalian-Cell)/ 0.5 mg (Baculovirus)/ 1 mg (Baculovirus)

Species Arabidopsis thaliana (Mouse-ear cress)

Full Product Name

Recombinant Arabidopsis thaliana Probable 1-deoxy-D-xylulose-5-phosphate synthase, chloroplastic (CLA1), partial

Product Gene Name

CLA1 recombinant protein

Product Synonym Gene Name

CLA1

Purity

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

Sequence

ASLAKEGEYY SNRPPTPLLD TINYPHMK N LSVKELKQLS DELRSDVIFN VSKTG GHLGS SLGVVELTVA LHYIFNT PQD KILWDVGHQS YPHKILTGR R GKMP TMRQTN GLSGFTKRGE SEHDCFGTGH SSTTISAGLG MAVGRDLK GK NNNVVAVIGD GAMTAGQAYE AMN NAGY LDS DMIVILNDNK QVSLPTATLD GPSP PVGALS SALSRLQSNP ALRELREVA K GMTKQIGGPM HQLAAKVDEY ARGMISGTGS SLFEELGLYY IGPVDGHNID DLVAILKEVK STRTTGPVLI HVVTEKGRGY PYAERADDKY HGVVKFDPAT GRQFKTTNKT QSYTTYFAEA LVAAEVDKD VVAIHAAMGG GTGLNLFQRR FPTRCFDVGI AEQHAVTFAA GLACEGLKPF CAIYSSFMQR AYDQVVHDVD LQKLPVRFAM DRAGLVGADG PTHCGAFDVT FMACLPNMIV MAPSDEADLF NMVATAVAID DRPSC

Sequence Positions

59-553aa; Partial, provide the homologous sequence of domain I and II.

Format

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

Host

E Coli or Yeast or Baculovirus or Mammalian Cell

Molecular Weight

76,833 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.

NCBI Accession

NP_193291.1

NCBI GI

15234642

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

Probable 1-deoxy-D-xylulose-5-phosphate synthase, chloroplastic (CLA1), Recombinant Protein

Cat RP02295

Size 0.5 mg (E-Coli)/ 0.05 mg (Baculovirus)/ 0.5 mg (Yeast)/ 0.05 mg (Mammalian-Cell)/ 1 mg (E-Coli)/ 0.1 mg (Baculovirus)/ 1 mg

(Yeast)/ 0.1 mg (Mammalian-Cell)/ 0.5 mg (Baculovirus)/ 1 mg (Baculovirus)

NCBI GenBank Nucleotide

NM_117647.3

NCBI GeneID

827230

NCBI Official Full Name

Deoxyxylulose-5-phosphate synthase

NCBI Official Symbol

CLA1

NCBI Official Synonym Symbols

1-deoxy-D-xylulose 5-phosphate (DXP) synthase 1; 1-DEOXY-D-XYLULOSE 5-PHOSPHATE SYNTHASE; 1-DEOXY-D-XYLULOSE 5-PHOSPHATE SYNTHASE 2; AtCLA1; CLA; CLOROPLASTOS ALTERADOS 1; DEF; DL3821W; DXPS2; DXS; DXS1; FCAALL.24

NCBI Protein Information

Deoxyxylulose-5-phosphate synthase

NCBI Summary

Encodes a protein with 1-deoxyxylulose 5-phosphate synthase activity involved in the MEP pathway. It is essential for chloroplast development in Arabidopsis

UniProt Gene Name

DXS

UniProt Synonym Gene Names

CLA1; DEF; 1-deoxyxylulose-5-phosphate synthase; DXP synthase; DXPS

UniProt Protein Name

1-deoxy-D-xylulose-5-phosphate synthase, chloroplastic

UniProt Synonym Protein Names

Protein CLOROPLASTOS ALTERADOS 1

UniProt Primary Accession

Q38854

UniProt Secondary Accession

O23407; O49738

UniProt Related Accession

Q38854

UniProt Comments

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

Probable 1-deoxy-D-xylulose-5-phosphate synthase, chloroplastic (CLA1), Recombinant Protein

Cat *RP02295*

Size *0.5 mg (E-Coli)/ 0.05 mg (Baculovirus)/ 0.5 mg (Yeast)/ 0.05 mg (Mammalian-Cell)/ 1 mg (E-Coli)/ 0.1 mg (Baculovirus)/ 1 mg*

(Yeast)/ 0.1 mg (Mammalian-Cell)/ 0.5 mg (Baculovirus)/ 1 mg (Baculovirus)
Catalyzes the acylon condensation reaction between C atoms 2 and 3 of pyruvate and glyceraldehyde 3-phosphate to yield 1-deoxy-D-xylulose-5-phosphate (DXP). Is a limiting enzyme for plastidic isoprenoid biosynthesis and essential for chloroplast development.

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY