Magnesium-chelatase subunit chll, chloroplastic (CHLI), Recombinant Protein

CD BioSciences
Plant Protein

Cat *RP01020*

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

Species
Arabidopsis thaliana (Mouse-ear cress)

Full Product Name
Recombinant Arabidopsis thaliana Magnesium-chelatase subunit chll, chloroplastic (CHLI)

Product Gene Name
CHLI recombinant protein

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

Sequence
VMNVATEINS TEQVVGKFDS KKSARPVYPF AAIVGQDEMK LCLLLNVIDP KIGGVMIMGD RGTGKSTTVR SLVDLLPEIN VVAGDPYNSD PIDPEFMGVE VRERVEKGEQ VPVIATKINM VDLPLGATED RVCGTIDIEK ALTEGVKAFE PGLLAKANRG ILYVDEVNLL DDHLVDVLLD SAASGWNTVE REGISISHPA RFILIGSGNP EEGELRPQLL DRFGMHAQVG TVRDADLRVK IVEERARFDS NPKDFRDTYK TEQDKLQDQI STARANLSSV QIDRELKVKI SRVCSELNVD GLRGDIVTNR AAKALAALKG KDRVTPDDVA TVIPNCLRHR LRKDPLESID SGVLVSEKFA EIFS

Sequence Positions
61-424, 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
46,270 Da

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

Protein Family
Magnesium-chelatase

NCBI Accession
NP_193583.1

NCBI GI
15233888

NCBI GenBank Nucleotide
NM_117962.3

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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https://www.cd-biosciences.com/plant-protein/

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NCBI GeneID
827580

NCBI Official Full Name
P-loop containing nucleoside triphosphate hydrolases superfamily protein

NCBI Official Symbol
CHLI1

NCBI Official Synonym Symbols
CH-42; CH42; CHL11; CHLI-1; CHLORINA 42; F28J12.140; F28J12_140; LOST1; low temperature with open-stomata 1; PROTOPORPHYRIN-IX MG-CHELATASE

NCBI Protein Information
P-loop containing nucleoside triphosphate hydrolases superfamily protein

NCBI Summary
Encodes the CHLI subunit of magnesium chelatase which is required for chlorophyll biosynthesis. All four cysteine residues of the protein form two disulfide bonds (Cys102-Cys193 and Cys354-Cys396) under oxidized conditions but are fully reduced by reduction. It was suggested that the redox state of CHLI is regulated in vivo by the change of the redox environment in the chloroplasts probably via the Trx system.

UniProt Gene Name
CHLI1

UniProt Synonym Gene Names
CH42; CS; Mg-chelatase subunit I-1

UniProt Protein Name
Magnesium-chelatase subunit ChlI-1, chloroplastic

UniProt Synonym Protein Names
Mg-protoporphyrin IX chelatase subunit ChlI-1; Protein CHLORINA 42

UniProt Primary Accession
P16127

UniProt Secondary Accession
Q0WUK7

UniProt Related Accession
P16127

UniProt Comments
Involved in chlorophyll biosynthesis. Catalyzes the insertion of magnesium ion into protoporphyrin IX to yield Mg-protoporphyrin IX. The magnesium-chelatase is a complex of three subunits, CHLI, CHLD and CHLH. The reaction takes place in two steps, with an ATP-dependent activation followed by an ATP-dependent chelation step. Possesses high affinity for ATP and may play a major role in chlorophyll biosynthesis. Does not bind abscisic acid (ABA), but is a positive regulator of ABA signaling.

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