Glucose-1-phosphate adenylyltransferase large subunit 1, chloroplastic (ADG2), Recombinant Protein

CD BioSciences
Plant Protein

Cat *RP01853*

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

Species
Arabidopsis thaliana (Mouse-ear cress)

Full Product Name
Recombinant Arabidopsis thaliana Glucose-1-phosphate adenylyltransferase large subunit 1, chloroplastic (ADG2)

Product Gene Name
ADG2 recombinant protein

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

Sequence
SSTNFSQKRI LMSLNSVAGE SKVQELETEK RDPRTVASII LGGGAGTRLF PLTKRRAKPA VPIGGAYRLI DVPMSNCINS GINKVYILTQ YNSASLNRHL ARAYNSNGLG FGDGYVEVLA ATQTPGESGK RWFQGTADAV RQFHWLFEDA RSKDIEDVLI LSGDHLYRMD YMDFIQDHRQ SGADISISCI PIDDRRASDF GLMKIDDKGR VISFSEKPKG DDLKAMAVDT TILGLSKEEA EKKPYIASMG VYVFKKEILL NLLRWRFPTA NDFGSEIIPF SAKEFYVNAY LFNDYWEDIG TIRSFFEANL ALTEHPGAFS FYDAAKPIYT SRRNLPPSKI DNSKLIDSII SHGSFLTNCL IEHSIVGIRS RVGSNVQLKD TVMLGADYYE TEAEVAALLA EGNVPIGIGE NTKIQECIID KNARVGKNVI IANSEGIQEA DRSSDGFYIR SGITVILKNS VIKDGVVI

Sequence Positions
55-522, 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
57,674 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
Serine/threonine-rich protein

NCBI Accession
NP_197423.1

NCBI GI
15239684

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E-mail: info@cd-biosci.com
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NCBI GenBank Nucleotide
NM_121927.3

NCBI GeneID
832042

NCBI Official Full Name
ADP glucose pyrophosphorylase large subunit 1

NCBI Official Symbol
APL1

NCBI Official Synonym Symbols
ADG2; ADP GLUCOSE PYROPHOSPHORYLASE 2; ADP glucose pyrophosphorylase large subunit 1; ADPG PYROPHOSPHORYLASE; T24G5.120; T24G5_120

NCBI Protein Information
ADP glucose pyrophosphorylase large subunit 1

NCBI Summary
Encodes the large subunit of ADP-glucose pyrophosphorylase which catalyzes the first, rate limiting step in starch biosynthesis. The large subunit plays a regulatory role whereas the small subunit (ApS) is the catalytic isoform. Four isoforms (ApL1-4) have been identified. ApL1 is the major large subunit isoform present in leaves. Mutational analysis of APS1 suggests that APL1 and APL2 can compensate for loss of APS1 catalytic activity,suggesting both have catalytic as well as regulatory functions.

UniProt Gene Name
ADG2

UniProt Synonym Gene Names
APL1

UniProt Protein Name
Glucose-1-phosphate adenylyltransferase large subunit 1, chloroplastic

UniProt Synonym Protein Names
ADP-glucose pyrophosphorylase; ADP-glucose synthase; AGPase S; Alpha-D-glucose-1-phosphate adenyl transferase

UniProt Primary Accession
P55229

UniProt Secondary Accession
O04929; Q9SXS1

UniProt Related Accession
P55229

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UniProt Comments

This protein plays a role in synthesis of starch. It catalyzes the synthesis of the activated glycosyl donor, ADP-glucose from Glc-1-P and ATP.

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