

Pyruvate, phosphate dikinase regulatory protein 1, chloroplastic (RP1), Recombinant Protein

Cat RP00302

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 Pyruvate, phosphate dikinase regulatory protein 1, chloroplastic (RP1)

Product Gene Name

RP1 recombinant protein

Purity

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

Sequence

SSSRTDVSTL DSDVSSSSNG VSEADMTAAK SIYIVSDGTG WTAEHAVNAA LGQFDYCLVD RGCPVNTHLF
SGIEDGEKLM EIKQAAREG AMVIYTLADP SMAEATMRAC KLWKIPSLDI LGPITESISS HLGTPNSGLS
RGITNSSLNE DYFKR IEAIE FTIKHDDGAL PENLEKADIV LVGVSR TGKT PLSTYLAQKG YKVS NP I VN
GVDLPKTLFE IDPRKV FGLM INPLVLQ GIR EARA KSLGLG SSFKTKYSEL GSVKEELELA KKIFAENPTW
PVIEVTESAI EETA AAVLRL YDERQSNRAM PRISKSY

Sequence Positions

87-403, 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

40,648 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

Pyruvate, phosphate dikinase regulatory protein

NCBI Accession

NP_001031686.1

NCBI GI

79325203

NCBI GenBank Nucleotide

NM_001036609.1

NCBI GeneID

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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827869 mg (Baculovirus)/ 1 mg (E-Coli)/ 1 mg (Yeast)/ 0.1 mg

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

NCBI Official Full Name

PPDK regulatory protein

NCBI Official Symbol

RP1

NCBI Official Synonym Symbols

ATRP1; F7J7.150; F7J7_150; PPDK regulatory protein; PPDK REGULATORY PROTEIN

NCBI Protein Information

PPDK regulatory protein

NCBI Summary

Encodes a PPDK regulatory protein that has both protein kinase and protein phosphatase activities towards PPDK (pyruvate orthophosphate dikinase).

UniProt Gene Name

RP1

UniProt Synonym Gene Names

AtRP1; BFRP1; PPDK RP1; PPDK regulatory protein 1

UniProt Protein Name

Pyruvate, phosphate dikinase regulatory protein 1, chloroplastic

UniProt Synonym Protein Names

Bifunctional dikinase regulatory protein 1; AtRP1; BFRP1; Pyruvate, Pi dikinase regulatory protein 1; PPDK RP1; PPDK regulatory protein 1

UniProt Primary Accession

O49562

UniProt Secondary Accession

Q2V3G6; B9DFD8

UniProt Related Accession

O49562

UniProt Comments

Bifunctional serine/threonine kinase and phosphorylase involved in the dark/light-mediated regulation of PPDK by catalyzing its phosphorylation/dephosphorylation. Dark/light-induced changes in stromal concentrations of the competing ADP and Pi substrates govern the direction of the reaction. In the dark, phosphorylates the catalytic intermediate of PPDK (PPDK-HisP), inactivating it. Light exposure induces the phosphorolysis reaction that reactivates PPDK. Unlike the kinase function which can utilize either Thr or Ser as target, the phosphorylase function has a strict substrate requirement for threonyl phosphate.

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