

Inositol-pentakisphosphate 2-kinase (IPK1), Recombinant Protein

Cat RP01009

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 Inositol-pentakisphosphate 2-kinase (IPK1)

Product Gene Name

IPK1 recombinant protein

Product Synonym Gene Name

IPK1

Purity

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

Sequence

MEMILEEKDA SDWIYRGEGG ANLVLAYAGS SPLFVGKVir IQKARRNDKA IKNANGVVSv LTSDEQHLWR
ENNELISSPN KEVLEQRYVK NVIIPLLGPk HVDAGVRVSv SKEFLECVDK KVTQRPLWR VNAANVDTSH
DSALILNDHS LFSQGISSGG DCISVEIKPK CGFLPTSRFI GKENMLKTSV SRFKMHQLLK LEYNEISEES
EYDPLDLFSG SKESVLEAIK ALYSTPQNNF RVFLNGSLIL GGSGESTGRT SPEIGYAFED ALKGFIQSED
GHRTECFLLQ VSDAVYGSGV LDRLLIEQKL DKLDIEGAIH SYDDLINQPC PICKEGKPLE AELSLHALPL
DESLKIVKEY LIAATAKDCS IMISFQSRNA WDSEPSGDYV SLKPTNQTFD YKVHFIDLSL KPLKRMESY
KLDKKIISFY NRKQKAENTA EQIGNSKPSH S

Sequence Positions

1-451, 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

50,509 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

Inositol-pentakisphosphate 2-kinase

NCBI Accession

NP_568613.1

NCBI GI

18422256

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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Cat *RP01009*

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*)
NCBI GenBank Nucleotide #
NM_123646.4

NCBI GeneID

834292

NCBI Official Full Name

inositol-pentakisphosphate 2-kinase 1

NCBI Official Symbol

IPK1

NCBI Official Synonym Symbols

AtIPK1; inositol-pentakisphosphate 2-kinase 1; M40H3; MJB21.19; MJB21_19

NCBI Protein Information

inositol-pentakisphosphate 2-kinase 1

NCBI Summary

Encodes an inositol tetra-/pentaphosphate 2-kinase, involved in the biosynthesis of phytic acid, a regulator of intracellular signaling, a highly abundant animal antinutrient, and a phosphate and mineral storage compound in plant seeds. Is also required for growth and modulates phosphate homeostasis at the transcriptional level.

UniProt Gene Name

IPK1

UniProt Synonym Gene Names

AtIPK1; InsP5 2-kinase

UniProt Protein Name

Inositol-pentakisphosphate 2-kinase

UniProt Synonym Protein Names

Inositol-1,3,4,5,6-pentakisphosphate 2-kinase; Ins(1,3,4,5,6)P5 2-kinase; AtIPK1; InsP5 2-kinase

UniProt Primary Accession

Q93YN9

UniProt Secondary Accession

Q9FMY6

UniProt Related Accession

Q93YN9

UniProt Comments

Phosphorylates Ins(1,3,4,5,6)P5 at position 2 to form Ins(1,2,3,4,5,6)P6 (InsP6 or phytate). Phytate is a regulator of intracellular signaling, a highly abundant animal antinutrient, and a phosphate store in plant seeds. Also phosphorylates Ins(1,3,4,6)P4 and Ins(1,4,5,6)P4 to produce Ins(1,2,3,4,6)P5 and Ins(1,2,4,5,6)P5.

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