

Armadillo repeat-containing kinesin-like protein 1 (ARK1), Recombinant Protein

Cat *RP03043*

Species

Arabidopsis thaliana (Mouse-ear cress)

Full Product Name

Recombinant *Arabidopsis thaliana* Armadillo repeat-containing kinesin-like protein 1 (ARK1) , partial

Product Gene Name

ARK1 recombinant protein

Product Synonym Gene Name

ARK1

Purity

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

Format

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

Host

E Coli or Yeast or Baculovirus or Mammalian Cell

Molecular Weight

105,195 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

Actin-regulating kinase

NCBI Accession

NP_001326426.1

NCBI GI

1063716835

NCBI GenBank Nucleotide

NM_001339702.1

NCBI GeneID

824652

NCBI Official Full Name

Armadillo/beta-catenin repeat family protein / kinesin motor family protein

NCBI Official Symbol

MRH2

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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NCBI Official Synonym Symbols

Arabidopsis thaliana KINESIN Ungrouped clade; ARK1; ARMADILLO REPEAT-CONTAINING KINESIN 1; AtKINUC; CA-ROP2 ENHANCER 1; CAE1; gene A; MORPHOGENESIS OF ROOT HAIR 2

NCBI Protein Information

Armadillo/beta-catenin repeat family protein / kinesin motor family protein

NCBI Summary

Armadillo-repeat containing kinesin-related protein. Plays a role during transition to root-hair tip growth. Mutants have short, branched root hairs and an excess of endoplasmic microtubules. Phenotype suggests ARK1 plays a role in modulating microtubule depolymerization during root hair tip growth.

UniProt Gene Name

KINUC

UniProt Protein Name

Kinesin-like protein KIN-UC

UniProt Synonym Protein Names

AtKINUC

UniProt Primary Accession

Q9SV36

UniProt Secondary Accession

A9CP38; F4JE41

UniProt Related Accession

Q9SV36

UniProt Comments

Acts as a plus-end microtubule-dependent motor protein (PubMed:25159991). Involved in the control of root hair tip growth by promoting microtubule depolymerization and limiting the accumulation of endoplasmic microtubules (PubMed:17957256, PubMed:17971038, PubMed:24400013, PubMed:25159991). In vitro, binds to polymerized actin through ARM repeats, and to polymerized tubulin through N-terminal motor domain (PubMed:17957256).

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