Protein argonaute 10 (AGO10), Recombinant Protein

CD BioSciences
Plant Protein

Cat *RP05432*

Species
Arabidopsis thaliana (Mouse-ear cress)

Full Product Name
Recombinant Arabidopsis thaliana Protein argonaute 10 (AGO10) , partial

Product Gene Name
AGO10 recombinant protein

Product Synonym Gene Name
AGO10

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
110,868 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
Protein argonaute

NCBI Accession
NP_001190464.1

NCBI GI
334188178

NCBI GenBank Nucleotide
NM_001203535.1

NCBI GeneID
834403

NCBI Official Full Name
Stabilizer of iron transporter SufD / Polynucleotidyl transferase

NCBI Official Symbol
AGO10

NCBI Official Synonym Symbols

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ARGONAUTE 10; ARGONAUTE PROTEIN 10; MQD19.17; MQD19_17; PINHEAD; PNH; ZLL; ZWILLE

NCBI Protein Information

Stabilizer of iron transporter SufD / Polynucleotidyl transferase

NCBI Summary

Encodes Argonaute10, a member of the EIF2C (elongation initiation factor 2c)/ Argonaute class of proteins. Required to establish the central-peripheral organization of the embryo apex. Along with WUS and CLV genes, controls the relative organization of central zone and peripheral zone cells in meristems. Acts in embryonic provascular tissue potentiating WUSCHEL function during meristem development in the embryo. AGO10 specifically sequesters miR166/165 to regulate shoot apical meristem development.

UniProt Gene Name

AGO10

UniProt Synonym Gene Names

PNH; ZLL

UniProt Protein Name

Protein argonaute 10

UniProt Synonym Protein Names

Protein PINHEAD; Protein ZWILLE

UniProt Primary Accession

Q9XGW1

UniProt Secondary Accession

O49256

UniProt Related Accession

Q9XGW1

UniProt Comments

Involved in RNA-mediated post-transcriptional gene silencing (PTGS). Main component of the RNA-induced silencing complex (RISC) that binds to a short guide RNA such as a microRNA (miRNA) or small interfering RNA (siRNA). RISC uses the mature miRNA or siRNA as a guide for slicer-directed cleavage of homologous mRNAs to repress gene expression. Required for reliable formation of primary and axillary shoot apical meristems. Specifies leaf adaxial identity by repressing the miR165 and miR166 microRNAs in the embryonic shoot apex, in the shoot apical meristem (SAM) and leaf. Represses the microRNA miR398 which targets CCS1 chaperone mRNAs for translational inhibition. Acts as a negative regulator of AGO1 protein level. Like AGO1, is required for stem cell function and organ polarity. Unlike AGO1, is not subjected to small RNA-mediated repression itself. Essential for multiple processes in development.

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