Probable rhamnose biosynthetic enzyme 2 (RHM2), Recombinant Protein

CD BioSciences
Plant Protein

Cat *RP01307*

Size *0.05 mg (E-Coli)/ 0.05 mg (Yeast)/ 0.2 mg (E-Coli)/ 0.5 mg (E-Coli)/ 0.05 mg (Baculovirus)/ 0.2 mg (Yeast)/ 0.1 mg (Baculovirus)/ 0.5 mg (Yeast)/ 0.05 mg (Mammalian-Cell)/ 1 mg (E-Coli)/ 0.5 mg (Baculovirus)/ 1 mg (Yeast)/ 0.1 mg (Mammalian-Cell)/ 1 mg (B*

Species
Arabidopsis thaliana (Mouse-ear cress)

Full Product Name
Recombinant Arabidopsis thaliana Probable rhamnose biosynthetic enzyme 2 (RHM2) , partial

Product Gene Name
RHM2 recombinant protein

Product Synonym Gene Name
RHM2

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

Sequence
ASLKFLIYGK TGWLGGLLGK LCEKQGITYE YGKGRLEDRA SLVADIRSIK PTHVFNAAGL TGRPNVDWCE SHKPETIRVN VAGTLTLADV CRENDLLMMN FATGCIFEYD ATHPEGSGIG FKEEDKPNFF GSFYSKTKAM VEELLREFDN VCTLRVRMPI SSDLNNPRNF ITKISRYNKV

Sequence Positions
381-560. Partial.

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

Host
E Coli or Yeast or Baculovirus or Mammalian Cell

Molecular Weight
75,226 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
Trifunctional UDP-glucose 4,6-dehydratase/UDP-4-keto-6-deoxy-D-glucose 3,5-epimerase/UDP-4-keto-L-rhamnose-reductase

NCBI Accession
NP_564633.2

NCBI GI
42562732

NCBI GenBank Nucleotide
NM_104228.3

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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NCBI GeneID
841785

NCBI Official Full Name
NAD-dependent epimerase/dehydratase family protein

NCBI Official Symbol
MUM4

NCBI Official Synonym Symbols
ARABIDOPSIS THALIANA MUCILAGE-MODIFIED 4; ARABIDOPSIS THALIANA RHAMNOSE BIOSYNTHESIS 2; ATMUM4; ATRHM2; F22G10.13; MUCILAGE-MODIFIED 4; RHAMNOSE BIOSYNTHESIS 2; RHM2

NCBI Protein Information
NAD-dependent epimerase/dehydratase family protein

NCBI Summary
encodes a putative NDP-L-rhamnose synthase, an enzyme required for the synthesis of the pectin rhamnogalacturonan I, the major component of Arabidopsis mucilage. Gene is involved in seed coat mucilage cell development. Mutant analyses suggest that MUM4 is required for complete mucilage synthesis, cytoplasmic rearrangement and seed coat development.

UniProt Gene Name
RHM2

UniProt Synonym Gene Names
AtRHM2

UniProt Protein Name
Trifunctional UDP-glucose 4,6-dehydratase/UDP-4-keto-6-deoxy-D-glucose 3,5-epimerase/UDP-4-keto-L-rhamnose-reductase RHM2

UniProt Synonym Protein Names
NDP-rhamnose synthase; Protein MUCILAGE-MODIFIED 4; Protein RHAMNOSE BIOSYNTHESIS 2; Rhamnose biosynthetic enzyme 2; AtRHM2; UDP-L-rhamnose synthase MUM4Including the following 2 domains:UDP-glucose 4,6-dehydratase

UniProt Primary Accession
Q9LPG6

UniProt Related Accession
Q9LPG6

UniProt Comments
Trifunctional enzyme involved in UDP-beta-L-rhamnose biosynthesis, a precursor of the primary cell wall components rhamnogalacturonan I (RG-I) and rhamnogalacturonan II (RG-II). Catalyzes the dehydration of UDP-glucose to form UDP-4-dehydro-6-deoxy-D-glucose followed by the epimerization of the C3' and C5' positions of UDP-4-dehydro-6-deoxy-D-glucose to form UDP-4-keto-beta-L-rhamnose and the reduction of UDP-4-keto-beta-L-rhamnose to yield UDP-beta-L-rhamnose (PubMed:17190829). Required for the normal seed coat epidermal development (PubMed:14671019).

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