UDP-Arabinopyranose Mutase 2 (RGP2) Arabidopsis Thaliana Recombinant Protein

PRODUCT OVERVIEW

Product Name	UDP-arabinopyranose mutase 2 (RGP2), Recombinant Protein
Full Product Name	Recombinant Arabidopsis thaliana UDP-arabinopyranose mutase 2 (RGP2)
Product Gene Name	RGP2 recombinant protein
Product Synonym Gene Name	RGP2
Sequence	MVEPANTVGL PVNPTPLLKD ELDIVIPTIR NLDFLEMWRP FLQPYHLIIV QDGDPSKKIH VPEGYDYELY NRNDINRILG PKASCISFKD SACRCFGYMV SKKKYIFTID DDCFVAKDPS GKAVNALEQH IKNLLCPSSP FFFNTLYDPY REGADFVRGY PFSLREGVST AVSHGLWLNI PDYDAPTQLV KPKERNTRYV DAVMTIPKGT LFPMCGMNLA FDRDLIGPAM YFGLMGDGQP IGRYDDMWAG WCIKVICDHL SLGVKTGLPY IYHSKASNPF VNLKKEYKGI FWQEEIIPFF QNAKLSKEAV TVQQCYIELS KMVKEKLSSL DPYFDKLADA MVTWIEAWDE LNPPAASGKA
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	40,890 Da
Sequence Positions	1-360, Full length protein
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q9LFW1
Species	Arabidopsis thaliana (Mouse-ear cress)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for RGP2 recombinant protein	MBS1327098 is a recombinant protein targeting RGP2. Also known as Recombinant Arabidopsis thaliana UDP-arabinopyranose mutase 2 (RGP2). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of RGP2 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for RGP2. It may not necessarily be applicable to this product.

NCBI GI #	15242351
NCBI GeneID	831419
NCBI Accession #	NP_197069.1
UniProt Primary Accession #	Q9LFW1

UniProt Secondary Accession #	O22428; Q8LB19
UniProt Related Accession #	Q9LFW1
GenBank Nucleotide #	NM_121569.3
NCBI Official Full Name	reversibly glycosylated polypeptide 2
NCBI Official Symbol	RGP2
NCBI Official Synonym Symbols	ATRGP2; F14F8.30; F14F8_30; reversibly glycosylated polypeptide 2; REVERSIBLY GLYCOSYLATED POLYPEPTIDE 2
UniProt Protein Name	UDP-arabinopyranose mutase 2
UniProt Synonym Protein Names	Reversibly glycosylated polypeptide 2
Protein Family	Ras-related protein
UniProt Gene Name	RGP2
UniProt Synonym Gene Names	AtRGP2
NCBI Protein Information	reversibly glycosylated polypeptide 2
NCBI Summary for RGP2	RGP2 is a UDP-arabinose mutase that catalyzes the interconversion between the pyranose and furanose forms of UDP-L-arabinose. It appears to be required for proper cell wall formation. rgp1(at3g02230)/rgp2 double mutants have a male gametophyte lethal phenotype. RGP2 fusion proteins can be found in the cytosol and peripherally associated with the Golgi apparatus. RGP2 was originally identified as Reversibly Glycosylated Polypeptide-2. Constitutive expression in tobacco impairs plant development and virus spread.
UniProt Comments for RGP2	UDP-L-arabinose mutase involved in the biosynthesis of cell wall non-cellulosic polysaccharides. Catalyzes the interconvertion of UDP-L-arabinopyranose (UDP-Arap) and UDP-L-arabinofuranose (UDP-Araf) in vitro. Preferentially catalyzes the formation of UDP-Arap from UDP-Araf. At thermodynamic equilibrium in vitro the ratio of the pyranose form over the furanose form is 95:5. Is not active on other UDP-sugars (UDP-Gal, UDP-Xyl, UDP-Glc, GDP-Man and GDP-Fuc) (PubMed:21478444). Functions redundantly with RGP2 and is essential for proper cell walls and pollen development. Probably involved in the formation of the pectocellulosic cell wall layer intine. Is probably active as heteromer in vivo (PubMed:17071651).
Research Articles on RGP2	**1.** RGP2 is required during microspore development and pollen mitosis, either affecting cell division and/or vacuolar integrity.
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