UDP-Glucuronate 4-Epimerase 4 (GAE4) Arabidopsis Thaliana Recombinant Protein

PRODUCT OVERVIEW

Product Name	UDP-glucuronate 4-epimerase 4 (GAE4), Recombinant Protein
Full Product Name	Recombinant Arabidopsis thaliana UDP-glucuronate 4-epimerase 4 (GAE4)
Product Gene Name	GAE4 recombinant protein
Product Synonym Gene Name	GAE4; UGlcAE1
Product Synonym Names	Recombinant UDP-glucuronate 4-epimerase 4 (GAE4); UDP-glucuronate 4-epimerase 4 EC= 5.1.3.6; UDP-glucuronic acid epimerase 4; AtUGlcAE1
Sequence	MSRLDDIPSS PGKFKMEKSS YLHRLRFQSS LTKFAFFSFF LLCLISLLFL RSPPSINPSS PSDPSRRSLR TNTYGGPAWE KRLRSSARIR TSTNNGITVL VTGAAGFVGT HVSAALKRRG DGVIGLDNFN DYYDPSLKRA RRALLERSGI FIVEGDINDV ELLRKLFKIV SFTHVMHLAA QAGVRYAMEN PSSYVHSNIA GFVNLLEICK SVNPQPAIVW ASSSSVYGLN TKVPFSEKDK TDQPASLYAA TKKAGEEIAH TYNHIYGLSL TGLRFFTVYG PWGRPDMAYF FFTKDILKGK SISIFESANH GTVARDFTYI DDIVKGCLAA LDTAEKSTGS GGKKRGPAQL RVFNLGNTSP VPVSDLVRIL ERQLKVKAKK NLIKMPRNGD VPFTHANISL AQRELGYKPT TDLQTGLKKF VRWYLSYYSG DKKAAAR
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 degree C. For extended storage, store at -20 or -80 degree C.
Molecular Weight	48,536 Da
Sequence Positions	1-437
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.
Chromosome Location	Chromosome: 2; NC_003071.7 (18682081..18684042). Location: chromosome: 2
3D Structure	ModBase 3D Structure for O22141
Species	Arabidopsis thaliana (Mouse-ear cress)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for GAE4 recombinant protein	MBS1254170 is a recombinant protein targeting GAE4. Also known as Recombinant Arabidopsis thaliana UDP-glucuronate 4-epimerase 4 (GAE4). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of GAE4 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 GAE4. It may not necessarily be applicable to this product.

NCBI GI #	15225451
NCBI GeneID	819139

NCBI Accession #	NP_182056.1
UniProt Primary Accession #	O22141
UniProt Related Accession #	A84889
GenBank Nucleotide #	NM_130094.2
NCBI Official Full Name	UDP-D-glucuronate 4-epimerase 4
NCBI Official Symbol	GAE4
NCBI Official Synonym Symbols	F4L23.18; GAE4; UDP-D-glucuronate 4-epimerase 4
UniProt Protein Name	UDP-glucuronate 4-epimerase 4
UniProt Synonym Protein Names	UDP-glucuronic acid epimerase 4
Protein Family	UDP-glucuronate 4-epimerase
UniProt Gene Name	GAE4
UniProt Synonym Gene Names	UGlcAE1; AtUGlcAE1
UniProt Entry Name	GAE4_ARATH
NCBI Protein Information	UDP-D-glucuronate 4-epimerase 4
NCBI Summary for GAE4	UDP-D-glucuronate 4-epimerase
UniProt Comments for GAE4	Function: Involved in the synthesis of the negatively charged monosaccharide that forms the backbone of pectic cell wall components. Catalytic activity: UDP-glucuronate = UDP-D-galacturonate. Enzyme regulation: Activated by glycerol, not effected by dimethyl sulfoxide and inhibited by high concentration of monovalent salts, UDP-xylose, UDP-arabinose or UDP. Ref.1 Subunit structure: Homodimer Probable. Ref.1 Subcellular location: Golgi apparatus › Golgi stack membrane; Multi-pass membrane protein Potential. Tissue specificity: In roots, leaves, siliques, flowers, pollen and stems. Ref.1 Ref.6 Ref.7 Sequence similarities: Belongs to the sugar epimerase family. Biophysicochemical propertiesKinetic parameters:Equilibrium between UDP-glucuronate and UDP-D-galacturonate established at 1:1.9. No activity with UDP-Galactose, UDP-Glucose, UDP-arabinose, UDP-Xylose, CDP-glucose or GDP-manose.KM=0.72 mM for UDP-glucuronate Ref.1pH dependence:Optimum pH is 7.5. Active from pH 6.8 to 8.2.Temperature dependence:Active between 20 and 55 degrees Celsius.
Research Articles on GAE4	**1.** Functional cloning of the gene and biochemical characterization of the encoded enzyme.
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