Creative Enzymes®

digalactosyldiacylglycerol synthase

Cat. No. EXWM-2470

Lot. No. (See product label)

Introduction

Description	Requires Mg2+. Diacylglycerol cannot serve as an acceptor molecule for galactosylation as in the reaction catalysed by EC 2.4.1.46, monogalactosyldiacylglyerol synthase. When phosphate is limiting, phospholipids in plant membranes are reduced but these are replaced, at least in part, by the glycolipids digalactosyldiacylglycerol (DGDG) and sulfoquinovosyldiacylglycerol. While both DGD1 and DGD2 are increased under phosphate-limiting conditions, DGD2 does not contribute significantly under optimal growth conditions. DGD2 is responsible for the synthesis of DGDG molecular species that are rich in C16 fatty acids at sn-1 of diacylglycerol whereas DGD1 leads to molecular species rich in C18 fatty acids. The enzyme has been localized to the outer side of chloroplast envelope membranes.
Synonyms	DGD1; DGD2; DGDG synthase (ambiguous); UDP-galactose-dependent DGDG synthase; UDP-galactose-dependent digalactosyldiacylglycerol synthase; UDP-galactose:MGDG galactosyltransferase; UDP-galactose:3-(β-D-galactosyl)-1,2-diacyl-sn-glycerol 6-α-galactosyltransferase

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 2.4.1.241
CAS No.	69913-00-4
Reaction	UDP-α-D-galactose + 1,2-diacyl-3-O-(β-D-galactosyl)-sn-glycerol = UDP + 1,2-diacyl-3-O-[α-D-galactosyl-(1→6)-β-D-galactosyl]-sn-glycerol
Notes	This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage	Store it at +4 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.