Creative Enzymes®

6-deoxyerythronolide-B synthase

Cat. No. EXWM-2276

Lot. No. (See product label)

Introduction

Description	The product, 6-deoxyerythronolide B, contains a 14-membered lactone ring and is an intermediate in the biosynthesis of erythromycin antibiotics. Biosynthesis of 6-deoxyerythronolide B requires 28 active sites that are precisely arranged along three large polypeptides, denoted DEBS1, -2 and -3. The polyketide product is synthesized by the processive action of a loading didomain, six extension modules and a terminal thioesterase domain. Each extension module contains a minimum of a ketosynthase (KS), an acyltransferase (AT) and an acyl-carrier protein (ACP).The KS domain both accepts the growing polyketide chain from the previous module and catalyses the subsequent decarboxylative condensation between this substrate and an ACP-bound methylmalonyl extender unit, introduce by the AT domain. This combined effort gives rise to a new polyketide intermediate that has been extended by two carbon atoms.
Synonyms	erythronolide condensing enzyme; malonyl-CoA:propionyl-CoA malonyltransferase (cyclizing); erythronolide synthase; malonyl-CoA:propanoyl-CoA malonyltransferase (cyclizing); deoxyerythronolide B synthase; 6-deoxyerythronolide B synthase; DEBS

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 2.3.1.94
CAS No.	87683-77-0
Reaction	propanoyl-CoA + 6 (2S)-methylmalonyl-CoA + 6 NADPH + 6 H+ = 6-deoxyerythronolide B + 7 CoA + 6 CO2 + H2O + 6 NADP+
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 ℃.