

## mycocerosate synthase

Cat. No. EXWM-2050 Lot. No. (See product label)

Introduction	
Description	This mycobacterial enzyme loads long-chain fatty acyl groups from their CoA esters and extends them by incorporation of three or four methylmalonyl (but not malonyl) residues, to form tri- or tetramethyl-branched fatty-acids, respectively, such as 2,4,6,8-tetramethyloctacosanoate (C32-mycocerosate). Since the enzyme lacks a thioesterase domain, the products remain bound to the enzyme and require additional enzyme(s) for removal. Even though the enzyme can accept C6 to C20 substrates in vitro, it prefers to act on C14-C20 substrates in vivo.
Synonyms	mas (gene name); mycocerosic acid synthase; acyl-CoA:methylmalonyl-CoA C- acyltransferase (decarboxylating, oxoacyl- and enoyl-reducing)
Product Information	
Form	Liquid or lyophilized powder
EC Number	EC 2.3.1.111
CAS No.	95229-19-9
Reaction	(1) a long-chain acyl-CoA + 3 methylmalonyl-CoA + 6 NADPH + 6 H+ + mycocerosate synthase = a trimethylated-mycocerosoyl-[mycocerosate synthase] + 4 CoA + 3 CO2 + 6 NADP+ + 3 H2O; (2) a long-chain acyl-CoA + 4 methylmalonyl-CoA + 8 NADPH + 8 H+ + mycocerosate synthase = a tetramethylated-mycocerosoyl-[mycocerosate synthase] + 5 CoA + 4 CO2 + 8 NADP+ + 4 H2O
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 °C for short term. For long term storage, store it at -20 °C~-80 °C.