Creative Enzymes®

monocyclic monoterpene ketone monooxygenase

Cat. No. EXWM-0704

Lot. No. (See product label)

Introduction

Description A flavoprotein (FAD). This Baeyer-Villiger monooxygenase enzyme from the Gram-positive bacterium Rhodococcus erythropolis DCL14 has wide substrate specificity, catalysing the lactonization of a large number of monocyclic monoterpene ketones and substituted cyclohexanones. Both (1R,4S)- and (1S,4R)-1-hydroxymenth-8-en-2-one are metabolized, with the lactone product spontaneously rearranging to form 3-isopropenyl-6-oxoheptanoate.

Synonyms 1-hydroxy-2-oxolimonene 1,2-monooxygenase; dihydrocarvone 1,2-monooxygenase; MMKMO

Product Information

Form Liquid or lyophilized powder

EC Number EC 1.14.13.105

Reaction (1) (–)-menthone + NADPH + H+ + O2 = (4R,7S)-7-isopropyl-4-methyloxepan-2-one + NADP+ + H2O; (2) dihydrocarvone + NADPH + H+ + O2 = 4-isopropenyl-7-methyloxepan-2-one + NADP+ + H2O; (3) (iso)-dihydrocarvone + NADPH + H+ + O2 = 6-isopropenyl-3-methyloxepan-2-one + NADP+ + H2O; (4a) 1-hydroxymenth-8-en-2-one + NADPH + H+ + O2 = 7-hydroxy-4-isopropenyl-7-methyloxepan-2-one + NADP+ + H2O; (4b) 7-hydroxy-4-isopropenyl-7-methyloxepan-2-one = 3-isopropenyl-6-oxoheptanoate (spontaneous)

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 ℃.