Creative Enzymes®

2-succinyl-5-enolpyruvyl-6-hydroxy-3-cyclohexene-1-carboxylic-acid synthase

Cat. No. EXWM-2036

Lot. No. (See product label)

Introduction

Description Requires Mg2+ for maximal activity. This enzyme is involved in the biosynthesis of vitamin K2 (menaquinone). In most anaerobes and all Gram-positive aerobes, menaquinone is the sole electron transporter in the respiratory chain and is essential for their survival. It had previously been thought that the products of the reaction were (1R,6R)-6-hydroxy-2-succinylcyclohexa-2,4-diene-1-carboxylate (SHCHC), pyruvate and CO2 but it is now known that two separate enzymes are involved: this enzyme and EC 4.2.99.20, 2-succinyl-6-hydroxy-2,4-cyclohexadiene-1-carboxylate synthase. Under basic conditions, the product can spontaneously lose pyruvate to form SHCHC.

Synonyms SEPHCHC synthase; MenD

Product Information

Form Liquid or lyophilized powder

EC Number EC 2.2.1.9

CAS No. 1112282-73-1

Reaction isochorismate + 2-oxoglutarate = 5-enolpyruvoyl-6-hydroxy-2-succinyl-cyclohex-3-ene-1-carboxylate + CO2

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 ℃.