

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 °C for short term. For long term storage, store it at -20 °C~-80 °C.