

dichlorochromopyrrolate synthase

Cat. No. EXWM-1261

Lot. No. (See product label)

Introduction

Description

This enzyme catalyses a step in the biosynthesis of rebeccamycin, an indolocarbazole alkaloid produced by the bacterium *Lechevalieria aerocolonigenes*. The enzyme is a dimeric heme-protein oxidase that catalyses the oxidative dimerization of two L-tryptophan-derived molecules to form dichlorochromopyrrolic acid, the precursor for the fused six-ring indolocarbazole scaffold of rebeccamycin. Contains one molecule of heme b per monomer, as well as non-heme iron that is not part of an iron-sulfur center. In vivo the enzyme uses hydrogen peroxide, formed by the enzyme upstream in the biosynthetic pathway (EC 1.4.3.23, 7-chloro-L-tryptophan oxidase) as the electron acceptor. However, the enzyme is also able to catalyse the reaction using molecular oxygen.

Synonyms

RebD; chromopyrrolic acid synthase; chromopyrrolate synthase

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 1.21.98.2

Reaction

$2 \text{ 3-(7-chloroindol-3-yl)-2-iminopropanoate} + \text{H}_2\text{O}_2 = \text{dichlorochromopyrrolate} + \text{NH}_3 + 2 \text{ H}_2\text{O}$

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.