

7,8-didemethyl-8-hydroxy-5-deazariboflavin synthase

Cat. No. EXWM-2815

Lot. No. (See product label)

Introduction

Description

Binds a [4Fe-4S] cluster. The cluster is coordinated by 3 cysteines and an exchangeable AdoMet molecule. The first stage of catalysis is reduction of the 2 AdoMet to produce 2 methionine and 2 5'-deoxyadenosin-5-yl radicals that extract a hydrogen from each of the substrates permitting the condensation of the two. The overall reaction catalysed is the transfer of the hydroxybenzyl group from 4-hydroxyphenylpyruvate (HPP) to 5-amino-6-ribitylamino-pyrimidine-2,4(1H,3H)-dione to form 7,8-didemethyl-8-hydroxy-5-deazariboflavin (FO). 7,8-Didemethyl-8-hydroxy-5-deazariboflavin is the chromophore of the hydride carrier coenzyme F420.

Synonyms

FO synthase

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 2.5.1.77

Reaction

5-amino-6-(D-ribitylamino)uracil + 3-(4-hydroxyphenyl)pyruvate + 2 S-adenosyl-L-methionine + H₂O = 7,8-didemethyl-8-hydroxy-5-deazariboflavin + 2 L-methionine + 2 5'-deoxyadenosine + oxalate + NH₃

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.