Creative Enzymes®

dihydroorotate dehydrogenase (quinone)

Cat. No. EXWM-1386

Lot. No. (See product label)

Introduction

Description	This Class 2 dihydroorotate dehydrogenase enzyme contains FMN. The enzyme is found in eukaryotes in the mitochondrial membrane, in cyanobacteria, and in some Gram-negative and Gram-positive bacteria associated with the cytoplasmic membrane. The reaction is the only redox reaction in the de-novo biosynthesis of pyrimidine nucleotides. The best quinone electron acceptors for the enzyme from bovine liver are ubiquinone-6 and ubiquinone-7, although simple quinones, such as benzoquinone, can also act as acceptor at lower rates. Methyl-, ethyl-, tert-butyl and benzyl (S)-dihydroorotates are also substrates, but methyl esters of (S)-1-methyl and (S)-3-methyl and (S)-1,3-dimethyldihydroorotates are not. Class 1 dihydroorotate dehydrogenases use either fumarate (EC 1.3.98.1), NAD+ (EC 1.3.1.14) or NADP+ (EC 1.3.1.15) as electron acceptor.
Synonyms	dihydroorotate:ubiquinone oxidoreductase; (S)-dihydroorotate:(acceptor) oxidoreductase; (S)-dihydroorotate:acceptor oxidoreductase; DHOdehase (ambiguous); DHOD (ambiguous); DHODase (ambiguous); DHODH

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.3.5.2
CAS No.	59088-23-2
Reaction	(S)-dihydroorotate + a quinone = orotate + a quinol
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 ℃.