

## 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<sup>+</sup> (EC 1.3.1.14) or NADP<sup>+</sup> (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 °C for short term. For long term storage, store it at -20 °C~-80 °C.