Creative Enzymes®

# dihydroorotate dehydrogenase (NAD+)

*Cat. No. EXWM-1288*

*Lot. No.* (See product label)

## Introduction

***Description*** Binds FMN, FAD and a [2Fe-2S] cluster. The enzyme consists of two subunits, an FMN binding catalytic subunit and a FAD and iron-sulfur binding electron transfer subunit. The reaction, which takes place in the cytosol, is the only redox reaction in the de-novo biosynthesis of pyrimidine nucleotides. Other class 1 dihydroorotate dehydrogenases use either fumarate (EC 1.3.98.1) or NADP+ (EC 1.3.1.15) as electron acceptor. The membrane bound class 2 dihydroorotate dehydrogenase (EC 1.3.5.2) uses quinone as electron acceptor.

***Synonyms*** orotate reductase (NADH); orotate reductase (NADH2); DHOdehase (ambiguous); DHOD (ambiguous); DHODase (ambiguous); dihydroorotate oxidase, pyrD (gene name)

## Product Information

***Form*** Liquid or lyophilized powder

***EC Number*** EC 1.3.1.14

***CAS No.*** 37255-26-8

***Reaction*** (S)-dihydroorotate + NAD+ = orotate + NADH + H+

***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 ℃.