

## Dihydroorotate Dehydrogenase Protein, Human (His)

Cat. No.:	HY-P78957
Synonyms:	Dihydroorotate dehydrogenase (quinone), mitochondrial; DHODH; DHOdehase; Dihydroorotate oxidase; Dihydroorotate Dehydrogenase
Species:	Human
Source:	E. coli
Accession:	Q02127 (T31-R395)
Gene ID:	1723
Molecular Weight:	45.1kDa

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 µm filtered solution of Tris-based buffer, 50% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	Dihydroorotate dehydrogenase (DHODH) is a pivotal enzyme that plays a crucial role in the de novo biosynthesis of UMP (uridine monophosphate). Its catalytic function involves the conversion of dihydroorotate to orotate, utilizing a quinone as an electron acceptor. This enzymatic activity is essential for the biosynthesis of UMP, a key component of RNA and DNA. As a critical player in pyrimidine biosynthesis, DHODH contributes to the generation of nucleotides required for cellular processes such as DNA replication and RNA synthesis. The involvement of DHODH in the de novo pathway underscores its significance in maintaining the cellular pool of pyrimidine nucleotides, making it an essential enzyme for various biological processes (adapted from the provided passage).
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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