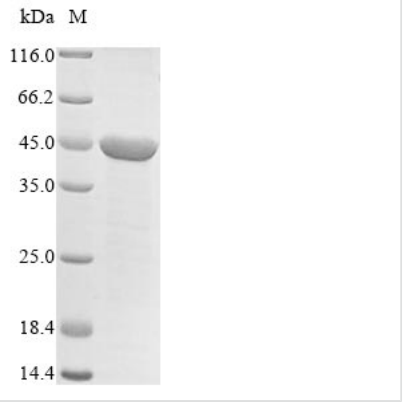
Recombinant Mouse Dihydroorotate dehydrogenase (quinone),mitochondrial (Dhodh), partial

Product Code	CSB-EP006852MO1
Relevance	Catalyzes the conversion of dihydroorotate to orotate with quinone as electron acceptor.
Abbreviation	Recombinant Mouse Dhodh protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	O35435
Product Type	Recombinant Protein
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	TGDDHFYAEYLMPALQRLLDPESAHRLAVRVISLGLLPRATFQDSNMLEVRVL GHKFRNPVGIAAGFDKHGEAVDGLYKLGFGFVEVGSVTPQPQEGNPRPRVFR LPEDQAVINRYGFNSHGLSAVEHRLRARQQKQTQLTTDGLPLGINLGKNKTSV DAAADYVEGVRILGPLADYLVVNVSSPNTAGLRSLQGKTELRRLLSKVLQERD ALKGPQKPAVLVKIAPDLTAQDKEDIASVARELGIDGLIITNTTVSRPVGLQGAL RSETGGLSGKPLRDLSTQTIREMYALTQGTIPIIGVGGVSSGQDALEKIQAGAS LVQLYTALTFLGPPVVARVKRELEALLKERGFNTVTDAIGVDHRR
Research Area	Metabolism
Source	E.coli
Target Names	Dhodh
Protein Names	Dihydroorotate oxidase
Expression Region	31-395aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	45.0 kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The preparation of Recombinant Mouse Dhodh protein included 3 main steps: construct the expression vector, expression of protein of interest, and protein purification. Every step was performed under a strict QC system so that we got the premium protein. This Dhodh was expressed in E.coli at and fused with N-terminal 6xHis tag. According to SDS-PAGE, the purity turns out to be 85%+.

Dhodh is a key enzyme in de novo pyrimidine biosynthesis. the expression level of dihydroorotate dehydrogenase has been reported to be elevated in various types of malignant tumors and its tumor-promoting effect was considered to relate to its pyrimidine synthesis function. Dhodh is the rate-limiting enzyme in the uridine monophosphate (UMP) biosynthetic pathway and mostly located in the inner membrane of mitochondria, catalyzing the transformation of dihydroorotate to orotate dependent of Mg2+ and ATP. Mutations of Dhodh have been associated with various genetic diseases. For example, Dhodh G202A, R346W causes deficient protein stability and R135C impairs the enzymatic activity, which are linked to Miller syndrome. Dhodh polymorphism was reported to be linked with rheumatoid arthritis and lung cancer as well. Additionally, enhanced activity of DHODH has been implicated as a biomarker of malignant tumor including gastric cancer and skin cancer.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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