Recombinant mouse Dihydrofolate reductase/DHFR protein

Catalog Number: ATGP0912

PRODUCT INFORMATION

Expression system
E.coli

Domain
1-187aa

UniProt No.
P00375

NCBI Accession No.
NP_034179.1

Alternative Names
Dihydrofolate reductase, EC 1.5.1.3

PRODUCT SPECIFICATION

Molecular Weight
23.8 kDa (207aa) confirmed by MALDI-TOF

Concentration
1mg/ml (determined by Bradford assay)

Formulation
Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol, 2mM DTT, 0.1M NaCl.

Purity
> 95% by SDS-PAGE

Endotoxin level
< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity
Specific activity is > 2000pmol/min/ug, and is defined as the amount of enzyme that converts 1.0pmole of dihydrofolic acid to tetrahydrofolic acid per minute at pH 6.5 at 25C.

Tag
His-Tag

Application
SDS-PAGE, Enzyme Activity

Storage Condition
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Recombinant mouse Dihydrofolate reductase/DHFR protein

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Description

Dihydrofolate reductase (DHFR) is a member of the reductase family of enzymes that is ubiquitously expressed in all organisms. DHFR catalyzes the NADPH-dependent reduction of dihydrofolate to tetrahydrofolate, and it is essential for the synthesis of thymidylate, purines and several amino acids. Expression of methotrexate (MTX) - resistant variants of DHFR in normal hematopoietic cells is a potential strategy to permit administration of larger doses of MTX by alleviating drug toxicity in normal cells and tissues that are drug sensitive. Recombinant mouse DHFR protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

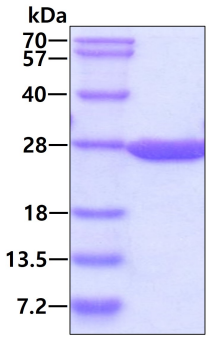
<MGSSHHHHHH SSGLVPRGSH> MVRPLNCIVA VSQNMGIGKN GDLPWPPLRN EFKYFQRMTT TSSVEGKQNL VIMGRKTWFS IPEKNRPLKD RINIVLSREL KEPPRGAHFL AKSLDDALRL IEQPELASKV DMVWIVGGSS VYQEAMNQPG HLRLFVTRIM QEFESDTFFP EIDLGKYKLL PEYPGVLSEV QEEKGIKYKF EVYEKKD

General References

Chen MJ., et al. (1984) J Biol Chem. 259(6):3933-43.
Cody V., et al. (2009) Biochemistry. 48(8):1702-11.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.