

DHFR

Recombinant Human Dihydrofolate Reductase/DHFR

Catalog No.	CS157A CS157B CS157C	Quantity:	10 µg 50 µg 1 mg
Alternate Names:	Dihydrofolate reductase, DHFR, DHFRP1.		
Description:	<p>Dihydrofolate reductase (DHFR) is an enzyme that reduces dihydrofolic acid to tetrahydrofolic acid, with NADPH as electron donor that can be converted to the kinds of tetrahydrofolate cofactors applied in 1-carbon transfer chemistry. DHFR converts dihydrofolate into tetrahydrofolate, which is a methyl group shuttle required for the de novo synthesis of purines, thymidylic acid, and specific amino acids. Even though the functional DHFR gene is mapped to chromosome 5, numerous intronless processed pseudogenes or dihydrofolate reductase-like genes are identified on separate chromosomes.</p> <p>DHFR deficiency is associated with megaloblastic anemia.</p> <p>DHFR knockdown plays a role in the anticancer activity of 2-hydroxyoleic acid.</p> <p>DHFR gene insertion/deletion polymorphism is linked to variation in serum and red blood cell folate concentrations in women.</p> <p>DHFR Human Recombinant fused with 20 amino acid His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 207 amino acids (1-187 a.a.) and having a molecular mass of 23.6kDa.</p> <p>The DHFR is purified by proprietary chromatographic techniques</p>		
Gene ID:	1719		
Source:	<i>E. coli</i>		
Molecular Mass:	23.6 kDa		
Formulation:	The DHFR solution contains 20mM Tris-HCl buffer (pH8.0), 0.1M NaCl 2mM DTT, and 30% glycerol.		
Purity:	Greater than 95.0% as determined by SDS-PAGE.		
Physical Appearance:	Sterile Filtered colorless solution.		
Specific Activity:	Specific activity is 1.5 - 2.5 units/ml and was obtained by measuring the oxidation of NADPH in absorbance at 340 nm during reaction. One unit will convert 1.0 umole of 7,8 dihydrofolate and beta-NADPH to 5,6,7,8-tetrahydrofolate and beta-NADP per minute at pH 6.5 at 25°C.		
Amino Acid Sequence:	MGSSHHHHHH SSGLVPRGSH MVGSLNCIVA VSQNMGIGKN GDLPWPPLRN EFRYFQRM TT TSSVEGKQNL VIMGKKTWFS IPEKNRPLKG RINLVLSREL KEPPQGAHFL SRSLDDALKL TEQPELANKV DMVWIVGGSS VYKEAMNHPG HLKLFVTRIM QDFESDTFFP EIDLEKYKLL PEYPGVLSDV QEEKGIKYKF EVYEKND.		
Storage & Stability:	DHFR although stable 4°C for 4 weeks, should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.		

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.



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