

32-2268: mDHFR Recombinant Protein

Alternative Name : Dihydrofolate reductase,DHFR,DHFRP1,AA607882,AI662710,AW555094,8430436I03Rik.

Description

Source : Escherichia Coli. DHFR Mouse Recombinant fused with a 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 23.8kDa. The DHFR is purified by proprietary chromatographic techniques. 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. DHFR deficiency is associated with megaloblastic anemia. DHFR knockdown plays a role in the anticancer activity of 2-hydroxyoleic acid. DHFR gene insertion/deletion polymorphism is linked to variation in serum and red blood cell folate concentrations in women.

Product Info

Amount :	20 µg
Purification :	Greater than 95.0% as determined by SDS-PAGE.
Content :	The DHFR solution (1 mg/ml) contains 20mM Tris-HCl buffer(pH 8.0), 10% glycerol, 2mM DTT and 0.1M NaCl.
Storage condition :	Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Avoid multiple freeze-thaw cycles.
Amino Acid :	MGSSHHHHHH SSGLVPRGSH MVRPLNCIVA VSQNMGIGKN GDLWPPLRN EFKYFQRM TT TSSVEGKQNL VIMGRKTWFS IPEKNRPLKD RINIVLSREL KEPPRG AHFL AKSLDDALRL IEQPELASKV DMVWIVGGSS VYQEAMNQP G HLRLVTRIM QEFESDTFFP EIDLGKYKLL PEYPGVLSEV QEEKGIKYKF EVEYK KD.

Application Note

Specific activity is > 0.2 units/mg, in which one unit will convert 1.0 umole of 7,8- $\text{Å}^{\text{â}}\text{â}^{\text{â}}$ dihydrofloate and beta-NADPH to 5,6,7,8-tetrahydrofloate and beta-NADP per min at pH 6.5 at 25C.