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Product Datasheet

Human Thymidylate synthase protein, His tag, Unconjugated GTX00420-PRO

Article Name	Human Thymidylate synthase protein, His tag, Unconjugated
Biozol Catalog Number	GTX00420-PRO
Supplier Catalog Number	GTX00420-pro
Alternative Catalog Number	GTX00420-PRO-10
Manufacturer	GeneTex
Category	Proteine/Peptide
Application	FA
Species Reactivity	Human
Conjugation	Unconjugated
NCBI	7298
UniProt	P04818
Buffer	Reconstitute with 20mM Tris (pH8.0) and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris (pH8.0), 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose, ProClin 300.
Expression System	E. coli
Form	Lyophilized powder
Sequence	N-terminal His-Tag, Gln36~Val313 (NP_001062.1)

Application Notes

Thymidylate synthetase (TYMS) is an enzyme that catalyzes the conversion of deoxyuridine monophosphate (dUMP) to deoxythymidine monophosphate (dTMP). The enzyme is essential for regulating the balanced supply of the 4 DNA precursors in normal DNA replication: defects in the enzyme activity affecting the regulation process cause various biological and genetic abnormalities. Thymidylate synthase is an enzyme of about 30 to 35kDa in most species except in protozoan and plants where it exists as a bifunctional enzyme that includes a dihydrofolate reductase domain. Besides, Aspartate Aminotransferase (AST) has been identified as an interactor of TYMS, thus a binding ELISA assay was conducted to detect the interaction of recombinant human TYMS and recombinant human AST. Briefly, TYMS were diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to AST-coated microtiter wells and incubated for 2h at 37C. Wells were washed with PBST and incubated for 1h with anti-TYMS pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37C. Finally, add 50 µl stop solution to the wells and read at 450nm immediately. The binding activity of TYMS and AST was in a dose dependent manner.