Active Recombinant Human TYMS protein, His-tagged

Cat. No. TYMS-616H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Human TYMS protein(P04818)(36-313 aa), fused with N-terminal His tag, was expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	36-313 aa
Form	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Bio-activity	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 100uL were then transferred to AST-coated microtiter wells and incubated for 2h at 37°C.

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	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 37°C. Finally, add 50µ stop solution to the wells and read at 450nm immediately. The binding activity of TYMS and AST was shown, and this effect was in a dose dependent manner.
Molecular Mass	35.6kDa
Endotoxin	<1.0EU per 1µg (determined by the LAL method).
Purity	> 90%
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Store at -20°C for 12 months. Aliquot and store at -80°C for 12 months.
Reconstitution	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name	TYMS thymidylate synthetase [Homo sapiens]
Official Symbol	TYMS
Synonyms	TYMS; thymidylate synthetase; TS; thymidylate synthase; HsT422; TMS; Tsase; TSase; HST422; MGC88736;
Gene ID	7298
mRNA Refseq	NM_001071

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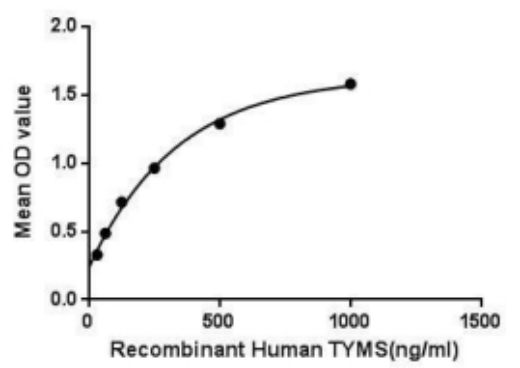
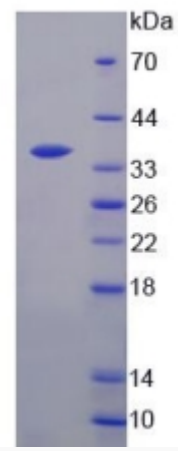
Protein Refseq	NP_001062
MIM	188350
UniProt ID	P04818
Activity	
SDS-PAGE	

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