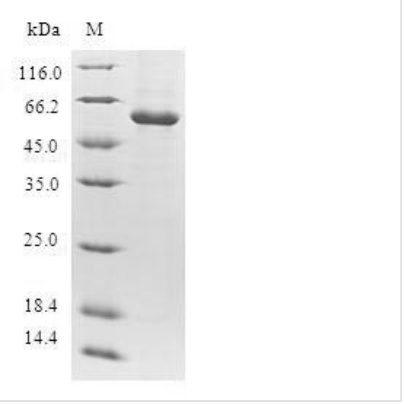
Recombinant Human Thymidylate kinase (DTYMK)

Product Code	CSB-EP007226HU
Relevance	Catalyzes the conversion of dTMP to dTDP.
Abbreviation	Recombinant Human DTYMK protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P23919
Alias	dTMP kinase
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MAARRGALIVLEGVDRAGKSTQSRKLVEALCAAGHRAELLRFPERSTEIGKLLSSYLQKKSDVEDHSVHLLFSANRWEQVPLIKEKLSQGVTLVVDRYAFSGVAFTGAKENFSLDWCKQPDVGLPKPDLVLFLQLQLADAAKRGAFGHERYENGAFQERALRCFHQLMKDTTLNWKMVDASKSIEAVHEDIRVLSEDAIRTATEKPLGELWK
Research Area	Epigenetics and Nuclear Signaling
Source	E.coli
Target Names	DTYMK
Protein Names	Recommended name: Thymidylate kinase EC= 2.7.4.9Alternative name(s): dTMP kinase
Expression Region	1-212aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal GST-tagged
Mol. Weight	50.7kDa
Protein Length	Full Length
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The expression region of this recombinant Human DTYMK covers amino acids 1-212. The calculated molecular weight for this DTYMK protein is 50.8 kDa. Expression of this DTYMK protein is conducted in e.coli. The DTYMK gene fragment has been modified by fusing the N-terminal GST tag, providing convenience in detecting and purifying the recombinant DTYMK protein during the following stages.

Thymidylate kinase (DTYMK) is a crucial enzyme involved in nucleotide metabolism, specifically in the synthesis of DNA. It catalyzes the phosphorylation of dTMP (deoxythymidine monophosphate) to form dTDP (deoxythymidine diphosphate). This reaction is essential for the deoxythymidine triphosphate (dTTP) biosynthesis pathway, a precursor necessary for DNA replication and repair. DTYMK contributes to the maintenance of proper nucleotide pools within cells, ensuring the availability of building blocks for DNA synthesis. Its activity is tightly regulated to support genomic integrity and cellular proliferation. Understanding the function of DTYMK provides insights into the broader cellular processes involved in DNA replication and repair, offering potential targets for therapeutic interventions in conditions where nucleotide metabolism is dysregulated.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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