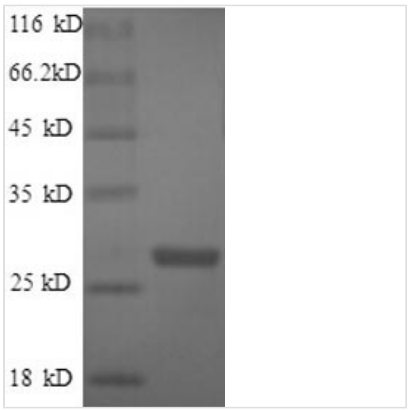
Recombinant Bacillus anthracis Thymidylate kinase (tmk)

Product Code	CSB-EP007226BQG
Relevance	Phosphorylation of dTMP to form dTDP in both de novo and salvage pathways of dTTP synthesis.
Abbreviation	Recombinant Bacillus anthracis Thymidylate kinase 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.	C3LJ02
Product Type	Recombinant Protein
Immunogen Species	Bacillus anthracis (strain CDC 684 / NRRL 3495)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MKGLFVTIEGPEGSGKTTLIQSLLPYFEQKEQKVMATREPGGIAISEDIRTILHK QEYTMMEARTEALLYAAARRQHLVEKVMPALNEDYLVLCDRFIDSSLAYQGYA RGLGMDKVFEINRFATEDCMPSLTIYLDIEPEVGLARIAKDAGREVNRLDMEDI SFHKRVREGYLQVVERFSDRIVLVNADQPMEKLIEEVIQVIEDKLL
Research Area	Others
Source	E.coli
Target Names	tmk
Expression Region	1-208aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	27.8kDa
Protein Length	Full Length
Image	 (Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The full-length cDNA ORF of Bacillus anthracis Thymidylate kinase (tmk) was N-terminally tagged a 6xHis and then expressed in E.coli. The Recombinant Bacillus anthracis tmk obtained was purified using SDS-PAGE analysis and got over 90% of purity. Under reducing conditions, the tmk protein migrated to an approximately 28 kDa molecular mass band on the SDS-PAGE gel. This recombinant tmk protein may be used to produce specific antibodies or find uses in the DNA synthesis-related studies.

Tmk is a key enzyme exerting an important role in DNA synthesis. It catalyzes the conversion of thymidine monophosphate (dTMP) to thymidine diphosphate (dTDP), with ATP as the preferred phosphoryl donor and in the presence of Mg2+. It takes place at the junction of the de novo and salvage pathways for thymidine triphosphate (dTTP) synthesis. Tmk is thus regarded as a potential therapeutic target for the development of antibacterial, antiparasitic, and anticancer drugs.

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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