

DTYMK Antibody / Thymidylate kinase Antibody (FY13652)

Catalog No.	Formulation	Size
FY13652	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

[Bulk quote request](#)

Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	P23919
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Immunofluorescence : 5ug/ml ELISA : 0.1-0.5 ug/ml
Limitations	Intended solely for research purposes, this DTYMK Antibody / Thymidylate kinase Antibody is not for clinical use.

DTYMK Antibody by IF in HeLa cells. Immunofluorescence staining of fixed HeLa cells with DTYMK Antibody shows green signal concentrated in the cytoplasmic and perinuclear regions, surrounding blue nuclear counterstaining. The image shows several cells with uneven cytoplasmic staining intensity. The staining pattern is described from the image without assigning it to a specific organelle, since no colocalization marker is shown. The Thymidylate kinase Antibody signal is visualized in green.

DTYMK Antibody by IHC in human liver cancer tissue. Immunohistochemistry of paraffin-embedded human liver cancer tissue using DTYMK Antibody, with antigen retrieval in EDTA buffer (pH 8.0) and blocking in 10% goat serum. The section was incubated with rabbit primary antibody at 2 ug/ml overnight at 4°C, followed by peroxidase-conjugated goat anti-rabbit IgG and DAB development. Strong brown staining is visible in tumor cell regions with blue counterstained nuclei. This experiment illustrates detection using the DTYMK antibody under the indicated staining conditions.

DTYMK Antibody by WB in 3 lysate samples. Western blot analysis using DTYMK Antibody was performed with 30 ug of protein per lane under reducing conditions on a 12% SDS-PAGE gel. Lane assignments: 1, human A549 whole-cell lysate; 2, human HeLa whole-cell lysate; 3, human PC-3 whole-cell lysate. Following electrophoresis, proteins were transferred to nitrocellulose and blocked with 5% non-fat milk. The membrane was incubated with rabbit primary antibody at 0.5 ug/ml overnight at 4oC and HRP-conjugated goat anti-rabbit IgG secondary antibody (1:5000). ECL detection showed an immunoreactive band near 24 kDa, consistent with the approximately 23.8 kDa expected size of DTYMK.

Description

DTYMK Antibody / Thymidylate kinase Antibody targets a protein with important roles in cellular biology. Thymidylate kinase (DTYMK), also called dTMP kinase, catalyzes the ATP-dependent phosphorylation of deoxythymidine monophosphate (dTMP) to deoxythymidine diphosphate (dTDP). This reaction occupies a central position in the production of deoxythymidine triphosphate (dTTP), one of the four nucleotide building blocks required for DNA synthesis. By connecting dTMP formation with downstream nucleotide phosphorylation, DTYMK helps maintain the supply of thymidine nucleotides during genome replication and repair.

Cells generate dTMP through both de novo and salvage pathways. Regardless of its source, dTMP must be phosphorylated before it can enter the dTTP pool used by DNA polymerases. DTYMK provides this intermediate step, while nucleoside diphosphate kinases can subsequently convert dTDP to dTTP. Nucleotide pools must remain balanced: shortages or disproportionate accumulation of individual deoxynucleotides can disrupt replication fidelity and promote genomic instability.

The requirement for thymidine nucleotide production becomes especially pronounced during rapid cell proliferation. DTYMK has consequently been investigated in the context of cell-cycle progression and cancer metabolism. Its role should nevertheless be distinguished from that of thymidylate synthase, which produces dTMP from dUMP; the two enzymes act at different stages of the same broader pathway. Perturbation of DTYMK activity may affect DNA synthesis even when upstream dTMP generation remains intact.

NSJ Bioreagents offers this DTYMK Antibody to support investigations of thymidylate metabolism and the biochemical demands of DNA replication. Understanding how dTMP kinase activity is coordinated with nucleotide synthesis and salvage pathways can clarify how cells preserve appropriate dTTP availability during proliferation and genome maintenance.

Explore related research targets in our [Cell Biology Antibodies](#) collection.

Application Notes

For best results, determine the optimal working dilution of the DTYMK Antibody / Thymidylate kinase Antibody experimentally.

Immunogen

The DTYMK Antibody was generated using e. coli-derived human DTYMK recombinant protein (amino acids L57-K212).

Storage

Following reconstitution, the DTYMK Antibody can be kept at 4oC for one month. Aliquot for extended storage at -20oC for up to six months, avoiding repeated freezing and thawing.

Alternate Names

DTYMK antibody, Thymidylate kinase antibody, deoxythymidylate kinase antibody, CDC8 antibody, dTMP kinase

antibody, EC:2.7.4.9 antibody, TMPK antibody, TYMK antibody