

T4 dNMP Kinase

T4 deoxy-Nucleotide Monophosphate Kinase

bacteriophage T4, recombinant, *E. coli*

Cat. No.	Amount
PR-340	10,000 Units

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied in 100 mM Tris-HCl, pH 7.5, 10 mM MgCl₂ and 50 % glycerol.

Activity

One unit of enzyme catalyses the phosphorylation of 1 nmol dGMP to dGDP per minute at 37°C.
Specific activity: 100 u/μg.

Activity Assay

1 μg T4 dNMP kinase, 2 mM ATP and 2 mM dGMP in 100 mM Tris-HCl, pH 7.5, 10 mM MgCl₂.

Purity

> 95% by SDS-PAGE

Description

NMP kinases catalyse the phosphorylation of nucleotide monophosphates resulting in the corresponding nucleotide diphosphates by using ATP as a phosphate donor.

T4 dNMP kinase is the only member of the family of NMP kinases that recognizes three structurally dissimilar nucleotides: dGMP, dTMP and 5-hydroxymethyl-dCMP (5-OH-dCMP).

Selected References:

- Teplyakov *et al.* (1996) Crystal structure of bacteriophage T4 deoxynucleotide kinase with its substrates dGMP and ATP. *EMBO J.* **15**:3487.
- Brush *et al.* (1993) Chemical modification of bacteriophage T4 deoxynucleotide kinase. Evidence of a single catalytic region. *J. Biol. Chem.* **268**:1603.
- Brush *et al.* (1990) Bacteriophage T4 deoxynucleotide kinase: gene cloning and enzyme purification. *J. Bacteriol.* **172**:2935.