

**T4 dNMP (deoxy-Nucleotide Monophosphate) Kinase**bacteriophage T4, recombinant, *E. coli*

Cat. No.	Amount
PR-340	100 µg

**For in vitro use only!****Shipping:** shipped on gel packs**Storage Conditions:** store at -20 °C**Additional Storage Conditions:** avoid freeze/thaw cycles**Shelf Life:** 12 months**Molecular Weight:** 27 kDa**Accession number:** AAD42414**Purity:** > 90 % (SDS-PAGE)**Form:** liquid (Supplied in 100 mM Tris-HCl pH 7.5, 10 mM MgCl<sub>2</sub> and 50 % glycerol)**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).

**Activity Assay:** 1 µg T4 dNMP kinase, 2 mM ATP and 2 mM dGMP in 100 mM Tris-HCl pH 7.5, 10 mM MgCl<sub>2</sub>.**Activity:**

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

**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.