



THYMIDYLATE KINASE from a prokaryote (Lot 110301a)

Recombinant

E-TMPK

04/13

(EC 2.7.4.9) ATP:dTMP phosphotransferase

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 25,396)
- Single major band on isoelectric focusing (pI ~ 5.6)

2. SPECIFIC ACTIVITY:

~ 3.8 U/mg protein at pH 7.6 and 25°C.

One Unit of thymidylate kinase is defined as the amount of enzyme required to produce one μ mole of NAD^+ from NADH under the following assay conditions:

TEA buffer, pH 7.6	73 mM
PEP	0.78 mM
MgCl ₂	7.3 mM
ATP	5.3 mM
TMP	0.57 mM
NADH	0.26 mM
Pyruvate kinase	4.4 U/mL
L-Lactate dehydrogenase	4.0 U/mL

3. OTHER ACTIVITIES (as a percentage of thymidylate kinase activity):

Enzyme Measured	Substrate	Activity, %
Thymidylate kinase	TMP	100
ATPase	ATP	~ 0.013
Myokinase	AMP	~ 0.088
NADH oxidase	NADH	~ 0.0069

4. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 7.6 and up to 25°C.

5. STORAGE AND USE CONDITIONS/RECOMMENDATIONS:

The enzyme is supplied as an ammonium sulphate suspension and should be stored at 4°C. For assay, this enzyme should be diluted in 100 mM TEA buffer, pH 7.6 containing 1 mg/mL BSA. **Swirl to mix the enzyme suspension immediately prior to use.**