



## THYMIDYLATE KINASE from a prokaryote (Lot 160302b)

### Recombinant

#### E-TMPK

03/19

(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:

**4 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  $\mu$ mole of  $\text{NAD}^+$  from NADH under the following assay conditions:

|                         |          |
|-------------------------|----------|
| TEA buffer, pH 7.6      | 73 mM    |
| PEP                     | 0.78 mM  |
| $\text{MgCl}_2$         | 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 a solution containing 50% glycerol and 0.02% sodium azide and should be stored below -10°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.**