PTA
Phosphotransacetylase
Phosphate acetyltransferase
Acetyl-CoA : orthophosphate acetyltransferase (EC 2.3.1.8)
from Leuconostoc mesenteroides

Reaction Equation
Acetyl-CoA + Orthophosphate = CoA + Acetyl phosphate

Specific Activity
IU/mg protein

Preparation and storage
Product Code: PTA-02
Ammonium sulfate suspension: 1°C ~ 10°C
IU per 1 ml suspension is approximately 4,000 units.

Specification

<table>
<thead>
<tr>
<th>Specific Activity</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>IU/mg protein</td>
<td>&gt;5,000 units</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contaminants</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myokinase</td>
<td>&lt;0.005%</td>
</tr>
<tr>
<td>Lactate dehydrogenase</td>
<td>&lt;0.005%</td>
</tr>
<tr>
<td>Acetate kinase</td>
<td>&lt;0.005%</td>
</tr>
</tbody>
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Assay Procedure

I. Spectrophotometric Method

Wavelength: 233 nm, Light path length: 1 cm, Temperature: 25°C

Pipette the following reagents into a cuvette
2.60 mL Tris-HCl buffer (0.1 mol/L, pH 7.5) containing KCl (0.115 mol/L)
0.20 mL CoA (6 mmol/L)
0.20 mL Acetyl phosphate (0.109 mol/L)
0.02 mL PTA (about 3 IU/ml)

II. Calculation

\[
\frac{\Delta A/\text{min}}{V \cdot D} = \text{IU/mL}
\]

\(\Delta A/\text{min}\) = The change in absorbance at 233 nm/minute
\(V\) = Total volume of reaction mixture (3.02 mL)
\(D\) = Enzyme dilution factor
4.44 = mM extinction coefficient of Acetyl CoA
(\(L \cdot \text{mmol}^{-1} \cdot \text{cm}^{-1}\))
\(d\) = Light path length (1 cm)
\(v\) = Volume of enzyme sample (0.02 mL)

(R)earch (e)agent (use only, not for medical use.)