Pyruvate Kinase preparation
from rabbit muscle

Product Number  P 1506
Storage Temperature  2-8 °C

Product Description
Molecular Weight: 237 kDa
CAS Number: 9001-59-6
Enzyme Commission (EC) Number: 2.7.1.40
Molecular Weight: 237 kDa
Extinction Coefficient: E₀.1% = 0.54

Pyruvate kinase from rabbit muscle is a tetramer consisting of four equal subunits of molecular weight 57 kDa.

Pyruvate kinase catalyzes the following reaction:

\[ \text{ATP} + \text{Pyruvate} \rightarrow \text{ADP} + \text{Phosphoenolpyruvate} \]

Reported \( K_m \) values are ATP (0.86 mM), pyruvate (10 mM), ADP (0.3 mM), and PEP (0.07 mM). Pyruvate kinase can also utilize other dinucleotide phosphates as substrates including GDP, IDP, dADP, UDP, CDP, dCDP. The pH optimum for pyruvate kinase is 7.5 and the mechanism of the reaction catalyzed by pyruvate kinase has been described in the literature.

Both \( \text{Mg}^{2+} \) and \( \text{K}^+ \) are required metal cofactors for optimal activity and the enzyme is inhibited by \( \text{Ca}^{2+} \).

Pyruvate kinase is often used as a coupling enzyme in conjunction with lactic dehydrogenase in quantifying ADP and the activity of enzymes that catalyze the formation of ADP.

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Storage/Stability
This enzyme is offered as a crystalline suspension in 3.2 M ammonium sulfate, pH 6.0. Dilute solutions should not be stored.

References