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PEP-CHA

磷酸烯醇式丙酮酸单环己胺盐

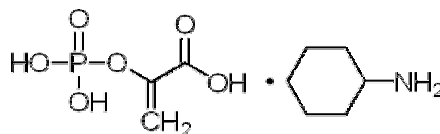
Phosphoenolpyruvic acid cyclohexylammonium salt

$C_3H_4O_6P \cdot C_6H_{14}N$

MW 267.22

CAS: 10526-80-4

Storage: -20°C



Appearance.....white to off-white powder

Solubility.....100mg/ml in H₂O

Purity.....>97%(enzymatic)

说明： Phosphoenolpyruvic acid (PEP) is an important chemical compound in biochemistry. It has the high-energy phosphate bond found (-61.9 kJ/mol) in living organisms, and is involved in glycolysis and gluconeogenesis. In plants, it is also involved in the biosynthesis of various aromatic compounds, and in carbon fixation; in bacteria, it is also used as the source of energy for the phosphotransferase system.

In glycolysis, PEP is formed by the action of the enzyme enolase on 2-phosphoglycerate. Metabolism of PEP to pyruvate by pyruvate kinase (PK) generates 1 molecule of ATP via substrate-level phosphorylation.

In gluconeogenesis, PEP is formed from the decarboxylation of oxaloacetate and hydrolysis of one GTP molecule. This reaction is catalyzed by the enzyme phosphoenolpyruvate carboxykinase (PEPCK). This reaction is a rate-limiting step in gluconeogenesis. $GTP + oxaloacetate \rightarrow GDP + phosphoenolpyruvate + CO_2$

In plants, PEP may be used for the synthesis of chorismate through the shikimate pathway. Chorismate may then be metabolized into the aromatic amino acids (phenylalanine, tryptophan and tyrosine) and other aromatic compounds.

In addition, in C4 plants, PEP serves as an important substrate in carbon fixation. The chemical equation, as catalyzed by phosphoenolpyruvate carboxylase (PEPCase, PEP carboxylase), is: $PEP + CO_2 \rightarrow oxaloacetate$.

友情提示：

- 微量试剂（10mg-1000mg 级）已用万分之一天平精确定量，请在原装管内按照所需浓度直接溶解即可。
- 微量试剂分装会因为各种原因（静电，产品性状，潮解等）造成较大损失，对粉剂的重新称量请斟酌。

注：本制品仅供科研用。请勿用于人体及动物的医疗、临床诊断或作为食品、化妆品、家庭用品的添加剂等用途。