

Product Name: AMP PNP

Catalog No.: 6086

Batch No.: 9

CAS Number: 72957-42-7

IUPAC Name: Adenosine-5'-[(β,γ)-imido]triphosphate tetralithium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₀H₁₃Li₄N₆O₁₂P₃

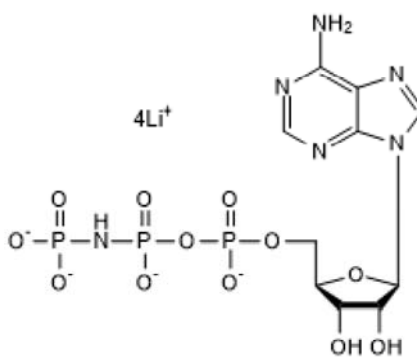
Batch Molecular Weight: 529.93

Physical Appearance: White solid

Solubility: water to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 97.6% purity

Mass Spectrum: Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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IUPAC Name: Adenosine-5'-[(β,γ)-imido]triphosphate tetralithium salt

Description:

AMP PNP is a non-hydrolyzable AMP analog. K_{ir6} (K_{ATP}) channel blocker. Inhibits fast axonal transport and stabilizes the interaction of membranous organelles with microtubules.

Physical and Chemical Properties:

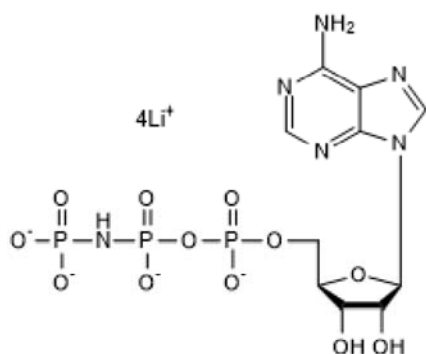
Batch Molecular Formula: $C_{10}H_{13}Li_4N_6O_{12}P_3$

Batch Molecular Weight: 529.93

Physical Appearance: White solid

Minimum Purity: $\geq 90\%$

Batch Molecular Structure:



Storage: Store at $-20^{\circ}C$

Solubility & Usage Info:

water to 50 mM

CAUTION - This product has been shown to undergo decomposition when dissolved in aqueous solution. The rate of decomposition can be minimized by making sure the pH of the solution remains basic (pH 7.5-10) and that solutions are used on the day of preparation.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a $45-60^{\circ}C$ water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at $-20^{\circ}C$ or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Hehl and Neumcke (1994) K_{ATP} channels of mouse skeletal muscle: mechanism of channel blockage by AMP-PNP. *Eur.Biophys.J.* **23** 231. PMID: 7805625.

Brady (1985) A novel brain ATPase with properties expected for the fast axonal transport motor. *Nature* **317** 73. PMID: 2412134.

Yount et al (1971) Adenylyl imidodiphosphate, an adenosine triphosphate analog containing a P-N-P linkage. *Biochemistry* **10** 2484. PMID: 4326768.

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