

**Product Name:** ATP $\gamma$ S tetralithium salt

**Catalog No.:** 4080

**Batch No.:** 22

CAS Number: 93839-89-5

EC Number: 298-862-8

IUPAC Name: Adenosine-5'-( $\gamma$ -thio)-triphosphate tetralithium salt

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>10</sub>H<sub>12</sub>Li<sub>4</sub>N<sub>5</sub>O<sub>12</sub>P<sub>3</sub>S

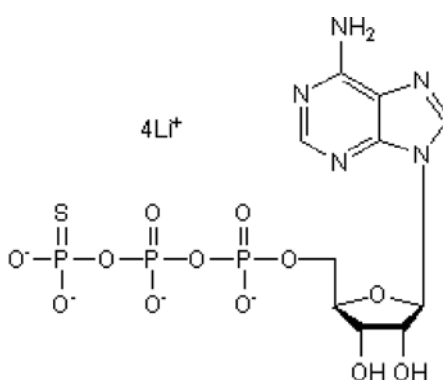
**Batch Molecular Weight:** 546.98

**Physical Appearance:** White solid

**Solubility:** water to 50 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 91.0% purity

**Mass Spectrum:** Consistent with structure

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

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**22**

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IUPAC Name: Adenosine-5'-( $\gamma$ -thio)-triphosphate tetralithium salt

**Description:**

ATP $\gamma$ S tetralithium salt is a P2 purinergic receptor agonist. Nonhydrolyzable analog of ATP (Cat. No. 3245).

**Physical and Chemical Properties:**

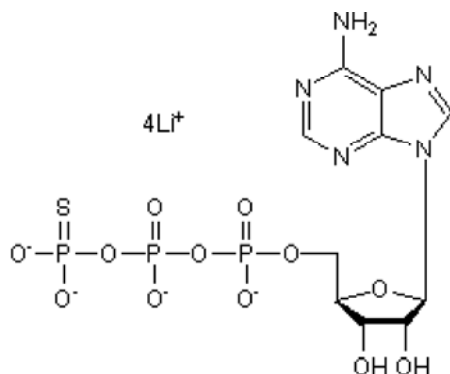
Batch Molecular Formula: C<sub>10</sub>H<sub>12</sub>Li<sub>4</sub>N<sub>5</sub>O<sub>12</sub>P<sub>3</sub>S

Batch Molecular Weight: 546.98

Physical Appearance: White solid

**Minimum Purity:**  $\geq$ 90%

**Batch Molecular Structure:**



**Storage:** Store at -20°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°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°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Peck and Herschlag** (2003) Adenosine 5'-O-(3-thio)triphosphate (ATP $\gamma$ S) is a substrate for the nucleotide hydrolysis and RNA unwinding activities of eukaryotic translation initiation factor eIF4A. *RNA* **9** 1180. PMID: 13130132.

**Evans et al** (1995) Pharmacological characterization of heterologously expressed ATP-gated cation channels (P2X purinoceptors). *Mol.Pharmacol.* **48** 178. PMID: 7544432.

**Chrysogelos et al** (1983) The structure of recA protein-DNA filaments. 2 recA protein monomers unwind 17 base pairs of DNA by 11.5 degrees/base pair in the presence of adenosine 5'-O-(3-thiotriphosphate). *J.Biol.Chem.* **258** 12624. PMID: 6313668.

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