

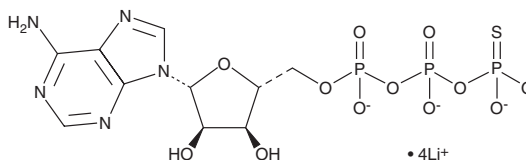
PRODUCT INFORMATION



Adenosine 5'-(γ-thio)-triphosphate (lithium salt)

Item No. 14957

CAS Registry No.: 93839-89-5
Formal Name: P'-anhydride with phosphorothioic acid adenosine 5'-(trihydrogen diphosphate), tetralithium salt
Synonym: ATPγS
MF: C₁₀H₁₂N₅O₁₂P₃S • 4Li
FW: 547.0
Purity: ≥90%
UV/Vis.: λ_{max}: 259 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Adenosine 5'-(γ-thio)-triphosphate (lithium salt) is supplied as a crystalline solid. Aqueous solutions of adenosine 5'-(γ-thio)-triphosphate (lithium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of adenosine 5'-(γ-thio)-triphosphate (lithium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

ATPγS (lithium salt) is a stable analog of ATP that acts as a potent agonist of G protein-coupled P2Y₂ and P2Y₁₁ receptors (pEC₅₀ = 5.52 for P2Y₁₁).¹ It has been used to identify kinase substrates, has been implemented as a reagent in the synthesis of DNA N-acetylglucosamine analogs, and can serve as a substrate for the RNA-stimulated nucleotide hydrolysis and RNA unwinding activities of eukaryotic initiation factor-4A.²⁻⁴

References

1. Jacobson, K.A., Ivanov, A.A., de Castro, S., *et al.* Development of selective agonists and antagonists of P2Y receptors. *Purinergic Signal.* **5(1)**, 75-89 (2009).
2. Knowles, J.R. Enzyme-catalyzed phosphoryl transfer reactions. *Annu. Rev. Biochem.* **49**, 877-919 (1980).
3. Chrysogelos, S., Register, J.C.I., and Griffith, J. 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(20)**, 12624-12631 (1983).
4. Peck, M.L. and Herschlag, D. Adenosine 5'-O-(3-thio)triphosphate (ATPγS) is a substrate for the nucleotide hydrolysis and RNA unwinding activities of eukaryotic translation initiation factor eIF4A. *RNA* **9(10)**, 1180-1187 (2003).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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