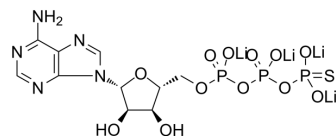


ATP γ S tetralithium salt

Cat. No.:	HY-108666
CAS No.:	93839-89-5
Molecular Formula:	C ₁₀ H ₁₂ Li ₄ N ₅ O ₁₂ P ₃ S
Molecular Weight:	546.98
Target:	Eukaryotic Initiation Factor (eIF)
Pathway:	Cell Cycle/DNA Damage
Storage:	-20°C, sealed storage, away from moisture * The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro

H₂O : 125 mg/mL (228.53 mM; Need ultrasonic)
DMSO : 100 mg/mL (182.82 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.8282 mL	9.1411 mL	18.2822 mL
	5 mM	0.3656 mL	1.8282 mL	3.6564 mL
	10 mM	0.1828 mL	0.9141 mL	1.8282 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (4.57 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (4.57 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (4.57 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ATP γ S (tetralithium salt) is a substrate for the nucleotide hydrolysis and RNA unwinding activities of eukaryotic translation initiation factor eIF4A^[1].

IC₅₀ & Target

eIF4

In Vitro

ATP γ S (tetralithium salt) enhances intrinsic fluorescence and induces aggregation which increases the activity of spinach Rubisco activase^[1].
ATP γ S (50-100 μM final blood concentration) attenuates inflammatory response with decreased accumulation of cells (48%,

P < 0.01) and proteins (57%, P < 0.01) in bronchoalveolar lavage and reduces neutrophil infiltration and extravasation of Evans blue albumin dye into lung tissue^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

ATPγS (tetralithium salt, 50 μM final, intravenous) demonstrates preserved lung parenchymal architecture^[3].

ATPγS results in a dose-dependent effect on EBA extravasation in LPS-treated mice^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Adv Res. 2022 Dec 13;S2090-1232(22)00285-5.

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REFERENCES

[1]. Matthew L Peck, et al. 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. 2003 Oct;9(10):1180-7.

[2]. ZY Wang, et al. Mg²⁺ and ATP or adenosine 5'-[gamma-thio]-triphosphate (ATP γ S) enhances intrinsic fluorescence and induces aggregation which increases the activity of spinach Rubisco activase. Biochim Biophys Acta. 1993 Sep 3;1202(1):47-55.

[3]. Irina A Kolosova, et al. Protective effect of purinergic agonist ATPγS against acute lung injury. Am J Physiol Lung Cell Mol Physiol. 2008 Feb;294(2):L319-24.

Caution: Product has not been fully validated for medical applications. For research use only.

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