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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

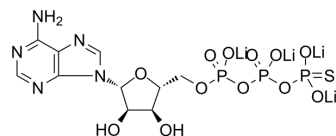
mail@szabo-scandic.com

www.szabo-scandic.com

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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	DMSO : 100 mg/mL (182.82 mM; Need ultrasonic)					
	H ₂ O : 75 mg/mL (137.12 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		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	1. 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					
	2. 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					
	3. 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 μ M 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.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA