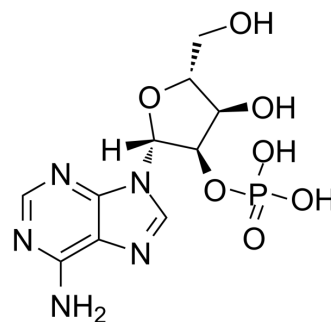


Adenosine-2'-monophosphate

Cat. No.:	HY-124151		
CAS No.:	130-49-4		
Molecular Formula:	C ₁₀ H ₁₄ N ₅ O ₇ P		
Molecular Weight:	347.22		
Target:	Adenosine Receptor; Endogenous Metabolite		
Pathway:	GPCR/G Protein; Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (180.00 mM; ultrasonic and warming and heat to 80°C)
 H₂O : 50 mg/mL (144.00 mM; ultrasonic and adjust pH to 7 with NaOH)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.8800 mL	14.4001 mL	28.8002 mL
	5 mM	0.5760 mL	2.8800 mL	5.7600 mL
	10 mM	0.2880 mL	1.4400 mL	2.8800 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 (7.20 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (7.20 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (7.20 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Adenosine-2'-monophosphate (2'-AMP) is converted by extracellular 2',3'-cAMP. Adenosine-2'-monophosphate is further metabolized to extracellular adenosine (a mechanism called the extracellular 2',3'-cAMP-adenosine pathway). Adenosine-2'-monophosphate inhibits LPS-induced TNF-α and CXCL10 production via A_{2A} receptor activation^{[1][2]}.

IC₅₀ & Target

A_{2A} adenosine receptor A_{2B} adenosine receptor Human Endogenous Metabolite

In Vitro

Adenosine-2'-monophosphate (2'-AMP) (0-100 μM; daily for 4 days) inhibits proliferation of preglomerular vascular smooth

muscle cells and glomerular mesangial cells via A_{2B} receptors^[1].

Adenosine-2'-monophosphate (30 μM; 24 hours) inhibits LPS induced (100 ng/ml) TNF-α and CXCL10 production in primary murine microglia^[1].

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

REFERENCES

[1]. Jackson EK, Gillespie DG, Dubey RK. 2'-AMP and 3'-AMP inhibit proliferation of preglomerular vascular smooth muscle cells and glomerular mesangial cells via A_{2B} receptors. J Pharmacol Exp Ther. 2011;337(2):444-450.

[2]. Newell EA, Exo JL, Verrier JD, et al. 2',3'-cAMP, 3'-AMP, 2'-AMP and adenosine inhibit TNF-α and CXCL10 production from activated primary murine microglia via A_{2A} receptors. Brain Res. 2015;1594:27-35.

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

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