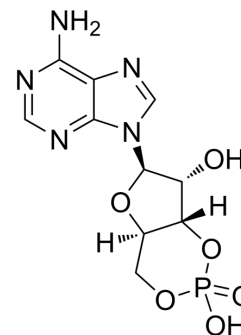


Cyclic AMP

Cat. No.:	HY-B1511		
CAS No.:	60-92-4		
Molecular Formula:	C ₁₀ H ₁₂ N ₅ O ₆ P		
Molecular Weight:	329.21		
Target:	Endogenous Metabolite		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

0.1 M NaOH : 50 mg/mL (151.88 mM; ultrasonic and adjust pH to 6 with NaOH)
 H₂O : 2.4 mg/mL (7.29 mM; Need ultrasonic)
 DMSO : < 1 mg/mL (insoluble or slightly soluble)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.0376 mL	15.1879 mL	30.3758 mL
	5 mM	0.6075 mL	3.0376 mL	6.0752 mL
	10 mM	0.3038 mL	1.5188 mL	3.0376 mL

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

BIOLOGICAL ACTIVITY

Description

Cyclic AMP (Cyclic adenosine monophosphate), adenosine triphosphate derivative, is an intracellular signaling molecule responsible for directing cellular responses to extracellular signals. Cyclic AMP is an important second messenger in many biological processes^{[1][2][3]}.

IC₅₀ & Target

Microbial Metabolite Human Endogenous Metabolite

In Vitro

Cyclic AMP (Cyclic adenosine monophosphate) modulates mediator generation. Cyclic AMP suppresses the expression of pro-inflammatory cytokines, including TNF-α and IL-12, and enhances the production of the anti-inflammatory cytokine IL-10.

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

CUSTOMER VALIDATION

- Nat Neurosci. 2022 May 30.
- Adv Sci (Weinh). 2024 Sep 4:e2402393.
- Nat Protoc. 2023 Apr 12.
- Biomaterials. 2024 Oct 2:314:122873.
- Talanta. 2023 Sep 6, 125171.

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REFERENCES

[1]. G M Fimia, et al. Cyclic AMP signaling. J Cell Sci. 2001 Jun;114(Pt 11):1971-2.

[2]. Paolo Sassone-Corsi, et al. The cyclic AMP pathway. Cold Spring Harb Perspect Biol. 2012 Dec 1;4(12):a011148.

[3]. Aronoff DM, et, al. Short communication: differences between macrophages and dendritic cells in the cyclic AMP-dependent regulation of lipopolysaccharide-induced cytokine and chemokine synthesis. J Interferon Cytokine Res. 2006 Nov;26(11):827-33.

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

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