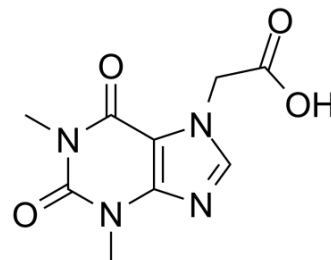


Acefylline

Cat. No.:	HY-B1505		
CAS No.:	652-37-9		
Molecular Formula:	C ₉ H ₁₀ N ₄ O ₄		
Molecular Weight:	238.2		
Target:	Adenosine Receptor; Protein Arginine Deiminase; Phosphodiesterase (PDE)		
Pathway:	GPCR/G Protein; Epigenetics; Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 33.33 mg/mL (139.92 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	4.1982 mL	20.9908 mL	41.9815 mL
		5 mM	0.8396 mL	4.1982 mL	8.3963 mL
10 mM		0.4198 mL	2.0991 mL	4.1982 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 (10.50 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (10.50 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Acefylline (Theophyllineacetic acid), a xanthine derivative, is an adenosine receptor antagonist. Acefylline is a peptidylarginine deiminase (PAD) activator. Acefylline is also a bronchodilator, which inhibits rat lung cAMP phosphodiesterase isoenzymes ^{[1][2]} .
IC₅₀ & Target	adenosine receptor ^[1]

REFERENCES

[1]. Ferretti C, et al. Inhibitory effect of theophylline, theophylline-7-acetic acid, ambroxol and ambroxol-theophylline-7-acetate on rat lung cAMP phosphodiesterase isoenzymes. *Int J Tissue React.* 1992;14(1):31-6.

[2]. Méchin MC, et, al. Acefylline activates filaggrin deimination by peptidylarginine deiminases in the upper epidermis. *J Dermatol Sci.* 2016 Feb;81(2):101-6.

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

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