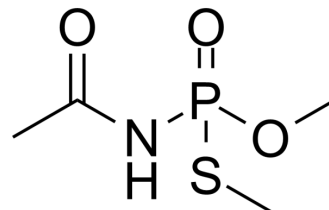


Acephate

Cat. No.:	HY-B0841	
CAS No.:	30560-19-1	
Molecular Formula:	C ₄ H ₁₀ NO ₃ PS	
Molecular Weight:	183.17	
Target:	Cholinesterase (ChE)	
Pathway:	Neuronal Signaling	
Storage:	Powder	-20°C 3 years 4°C 2 years
	In solvent	-80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 125 mg/mL (682.43 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	5.4594 mL	27.2970 mL	54.5941 mL
		5 mM	1.0919 mL	5.4594 mL	10.9188 mL
10 mM		0.5459 mL	2.7297 mL	5.4594 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (545.94 mM); Clear solution; Need ultrasonic				

BIOLOGICAL ACTIVITY

Description	Acephate is a broad-spectrum anticholinesterase insecticide. Acephate acts via inhibiting AChE (Cholinesterase (ChE)) activity of insects. Acephate is used for control of several species of insects in agriculture and in horticulture ^[1] .
IC ₅₀ & Target	AChE
In Vitro	In rat immature Leydig cells after 3-h culture, Acephate inhibits basal androgen output in a dose-dependent manner with the inhibition starting at 0.5 μM. Acephate significantly inhibits luteinizing hormone and 8-Br-cAMP stimulated androgen output at 50 μM. Acephate significantly inhibits progesterone-mediated androgen output at 50 μM ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Adult male mice are gavaged with 0, 7, 14, and 28 mg/kg/day acephate for 28 d and sperm motility and number are decreased at 14 and 28 mg/kg/day ^[1] .

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

REFERENCES

[1]. Yiyang Wang, et al. Acephate interferes with androgen synthesis in rat immature Leydig cells. Chemosphere. 2020 Apr;245:125597.

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

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