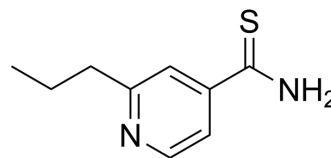


Prothionamide

Cat. No.:	HY-B0306		
CAS No.:	14222-60-7		
Molecular Formula:	C ₉ H ₁₂ N ₂ S		
Molecular Weight:	180.27		
Target:	Bacterial; Antibiotic		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (554.72 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	5.5472 mL	27.7362 mL	55.4723 mL
		5 mM	1.1094 mL	5.5472 mL	11.0945 mL
10 mM		0.5547 mL	2.7736 mL	5.5472 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 (13.87 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (13.87 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	<p>Prothionamide (or prothionamide) is a drug used in the treatment of tuberculosis; has also been tested for use in the treatment of leprosy. Target: Anti tuberculosis. Although ETH and PTH are both potent drugs against <i>M. tuberculosis</i> (MIC = 0.5 µg/ml) [24], they do not affect <i>E. coli</i> growth, even at very high concentrations (100 µg/ml), which is primarily caused by the absence of an EthA homologue in <i>E. coli</i> [1]. Clinical improvement was noted in 74% of the patients treated with ethionamide and in 83% of those treated with prothionamide. Therapy was well tolerated and drug-related hepatotoxicity did not require discontinuation of therapy. The 500-mg dose of both ethionamide and prothionamide resulted in loss in <i>Mycobacterium leprae</i> viability more rapidly than did the 250-mg dose, and prothionamide at both dose levels was superior to the equivalent dose of ethionamide [2].</p>
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REFERENCES

- [1]. Wang F, et al. Mechanism of thioamide drug action against tuberculosis and leprosy. *J Exp Med*. 2007 Jan 22;204(1):73-8.
- [2]. Fajardo TT, et al. A clinical trial of ethionamide and prothionamide for treatment of lepromatous leprosy. *Am J Trop Med Hyg*. 2006 Mar;74(3):457-61.
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Caution: Product has not been fully validated for medical applications. For research use only.

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