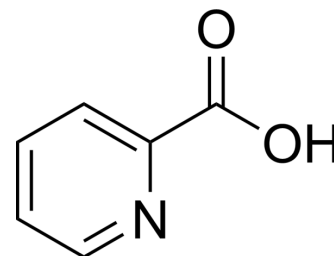


## Picolinic acid

<b>Cat. No.:</b>	HY-I0660	
<b>CAS No.:</b>	98-98-6	
<b>Molecular Formula:</b>	C <sub>6</sub> H <sub>5</sub> NO <sub>2</sub>	
<b>Molecular Weight:</b>	123.11	
<b>Target:</b>	Endogenous Metabolite; Virus Protease	
<b>Pathway:</b>	Metabolic Enzyme/Protease; Anti-infection	
<b>Storage:</b>	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 (812.28 mM; Need ultrasonic)  
 H<sub>2</sub>O : ≥ 50 mg/mL (406.14 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	8.1228 mL	40.6141 mL	81.2282 mL
	5 mM	1.6246 mL	8.1228 mL	16.2456 mL
	10 mM	0.8123 mL	4.0614 mL	8.1228 mL

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

#### In Vivo

- Add each solvent one by one: PBS  
Solubility: 100 mg/mL (812.28 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (20.31 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (20.31 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (20.31 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Picolinic acid (PCL 016) is a topical antiviral agent, which inhibits adenovirus replication in rabbits.

#### IC<sub>50</sub> & Target

Human Endogenous Metabolite

## In Vivo

Topical 1.5% PCL, 0.8% PCL, 0.369% PCL (pH7), 0.369% PCL (pH4) and 0.5% CDV are significantly more effective than the Control in reducing Ad Positive Cultures/Total (Days 1-14) and the Duration of Ad Shedding in the Ad5/NZW rabbit ocular model. Although not statistically significant, there appears to be a trend toward concentration-dependent efficacy of Picolinic acid on the Duration of Ad Shedding. There is no apparent ocular toxicity associated with Picolinic acid concentrations<sup>[1]</sup>.

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

## PROTOCOL

### Animal Administration <sup>[1]</sup>

Rabbits<sup>[1]</sup>

25 NZW rabbits are topically inoculated in both eyes, following corneal scarification, with  $1.5 \times 10^6$  pfu/eye of Ad5. On day 1, the rabbits are divided into 6 topical treatment groups: I - 1.5% PCL 016 pH 7.0 (n=4); II - 0.8% PCL 016 pH 7.0 (n=4); III - 0.369% PCL 016 pH 7.0 (n=4); IV - 0.369% PCL 016 pH 4.0 (n=4); V - 0.5% Cidofovir (CDV) (n=4); VI - Control (saline) (n=5). PCL 016 and control rabbits are treated in both eyes 4 times daily for 7 days, while CDV rabbits are treated in both eyes twice daily for 7 days. All eyes are cultured for virus on days 0, 1, 3, 4, 5, 7, 9, 11, and 14<sup>[1]</sup>.

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

## REFERENCES

[1]. E.G. Romanowski, et al. A Novel Topical Antiviral Agent, PCL-016 (Picolinic Acid), Inhibits Adenovirus Replication in the Ad5/NZW Rabbit Ocular Model. ARVO Annual Meeting Abstract. May 2005 Volume 46, Issue 13.

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

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