Picolinamide

Cat. No.: HY-101020

CAS No.: 1452-77-3

Molecular Formula: $C_6H_6N_2O$

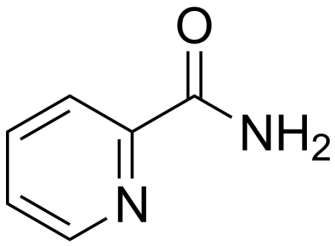
Molecular Weight: 122.12

Target: PARP

Pathway: Cell Cycle/DNA Damage; Epigenetics

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_2O : 100 mg/mL (818.87 mM; Need ultrasonic)
DMSO : 50 mg/mL (409.43 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	8.1887 mL	40.9433 mL	81.8867 mL
5 mM	1.6377 mL	8.1887 mL	16.3773 mL
10 mM	0.8189 mL	4.0943 mL	8.1887 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 (20.47 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (20.47 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (20.47 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Picolinamide (2-Picolinamide) is an inhibitor of Poly(ADP-ribose) synthetase of nuclei from rat pancreatic islet cells[1][3].

IC_{50} & Target

Poly(ADP-ribose) synthetase[1]

In Vitro

Picolinamide (10 μM-1 mM) inhibits Poly(ADP-ribose) synthetase activity[2].
Picolinamide (2 mM) protects against streptozotocin-induced depression of proinsulin synthesis in isolated pancreatic islets

	of rats[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Picolinamide (4 mmol/kg, i.p., rats) inhibits Na^+/phosphate cotransport by isolated renal brush border membrane vesicles[1]. Picolinamide (250 mg/kg, i.p., rats) enhances the tumorigenic effect of Streptozotocin and Alloxan on islet B-cells[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Rats[1]
Dosage:	4 mmol/kg
Administration:	Intraperitoneal injection (i.p.)
Result:	Increased renal cortical NAD content (1.5 fold).

REFERENCES

[1]. Campbell PI, et al. Specific inhibition of rat renal Na+/phosphate cotransport by picolinamide. J Pharmacol Exp Ther. 1989 Oct;251(1):188-92.

[2]. Uchigata Y, et al. Protection by superoxide dismutase, catalase, and poly(ADP-ribose) synthetase inhibitors against alloxan- and streptozotocin-induced islet DNA strand breaks and against the inhibition of proinsulin synthesis. J Biol Chem. 1982 Jun 10;257(11):6084-8.

[3]. Yamamoto H, et al. Protection by picolinamide, a novel inhibitor of poly (ADP-ribose) synthetase, against both streptozotocin-induced depression of proinsulin synthesis and reduction of NAD content in pancreatic islets. Biochem Biophys Res Commun. 1980 Jul 16;95(1):474-81.

[4]. amagami T, et al. Induction of rat pancreatic B-cell tumors by the combined administration of streptozotocin or alloxan and poly(adenosine diphosphate ribose) synthetase inhibitors. Cancer Res. 1985 Apr;45(4):1845-9.

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