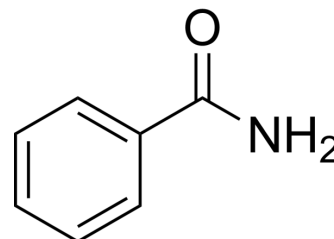


Benzamide

Cat. No.:	HY-Z0283
CAS No.:	55-21-0
Molecular Formula:	C ₇ H ₇ NO
Molecular Weight:	121.14
Target:	Endogenous Metabolite; PARP
Pathway:	Metabolic Enzyme/Protease; Cell Cycle/DNA Damage; Epigenetics
Storage:	Store at room temperature 3 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (825.49 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		1 mM		8.2549 mL	41.2746 mL	82.5491 mL
		5 mM		1.6510 mL	8.2549 mL	16.5098 mL
		10 mM		0.8255 mL	4.1275 mL	8.2549 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 (20.64 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (20.64 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (20.64 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Benzamide (Benzenecarboxamide) is a potent poly(ADP-ribose) polymerase (PARP) inhibitor. Benzamide has protective activity against both glutamate- and methamphetamine (METH)-induced neurotoxicity in vitro. Benzamide can attenuate the METH-induced dopamine depletions and exhibits neuroprotective activity in mice, also has no acute effect on striatal dopamine metabolism and does not reduce body temperature ^[1] .
IC ₅₀ & Target	Human Endogenous Metabolite
In Vivo	Benzamide (160 mg/kg; IP, 2 injection by a 4 h interval) attenuates the METH-induced dopamine depletions ^[1] .

Benzamide (160 mg/kg; IP, single dosage) has no acute effect on striatal dopamine metabolism and does not reduce body temperature^[1].

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

Animal Model:	C57B1/6N mice (intraperitoneal injection of METH at 2-h intervals; 4 injections of 5 mg/kg, 4 injections of 10 mg/kg, or 2 injections of 20 mg/kg) ^[1]
Dosage:	160 mg/kg
Administration:	IP, 2 injection by a 4 h interval
Result:	Partially and significantly attenuated the METH-induced dopamine depletions during the different METH treatment.
Animal Model:	C57B1/6N mice ^[1]
Dosage:	160 mg/kg
Administration:	IP, single dosage
Result:	Had no acute effect on striatal dopamine metabolism and did not reduce body temperature.

REFERENCES

[1]. Cosi C, et al. Benzamide, an inhibitor of poly(ADP-ribose) polymerase, attenuates methamphetamine-induced dopamine neurotoxicity in the C57B1/6N mouse. Brain Res. 1996 Oct 7;735(2):343-8.

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

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