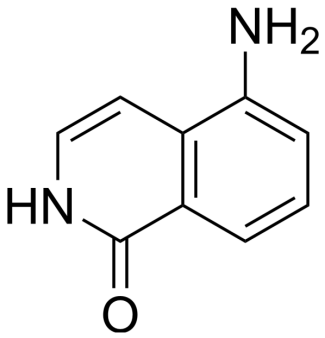
5-AIQ

Cat. No.:	HY-W006566
CAS No.:	93117-08-9
Molecular Formula:	$C_9H_8N_2O$
Molecular Weight:	160.17
Target:	PARP
Pathway:	Cell Cycle/DNA Damage; Epigenetics
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (624.34 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	6.2434 mL	31.2168 mL	62.4337 mL
5 mM	1.2487 mL	6.2434 mL	12.4867 mL
10 mM	0.6243 mL	3.1217 mL	6.2434 mL

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

BIOLOGICAL ACTIVITY

Description

5-AIQ (5-Aminoisoquinolin-1-one) is a water-soluble PARP-1 inhibitor. 5-AIQ is an important functional group in various drugs. 5-AIQ reduces the tissue injury associated with ischemia-reperfusion of the liver, it can be used for the research of the research conditions associated with ischemia-reperfusion of the liver[1][2].

IC_{50} & Target

PARP-1

In Vitro

5-AIQ (5000 μg) significantly reduces the number of colonies of TA 98 without metabolic activation, and TA 98 and TA 1537 with metabolic activation[1].

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

In Vivo

5-AIQ (150 and 250 mg/kg; p.o.; once) possess no significantly genotoxic in vivo system by micronucleus test[1].

5-AIQ (3 mg/kg; p.o.; 5 min prior to onset of liver ischemia) reduces the tissue injury associated with ischemia-reperfusion of the liver[2].

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

Animal Model:	Male mice[1]
Dosage:	150 and 250 mg/kg
Administration:	Oral administration; 150 and 250 mg/kg; once
Result:	Showed no increase of micronucleated polychromatic erythrocytes (MNPCE) in both 24 h and 48 h after both 125 and 250 mg/kg duration exposure as compared to the corresponding control.

Animal Model:	Anesthetised male Wistar rats with liver ischemia (for 30 minutes) and reperfusion (for 2 hours) [2]
Dosage:	3 mg/kg
Administration:	Intravenous injection; 3 mg/kg; 5 min prior to onset of liver ischemia
Result:	Reduced PARP activation and showed less staining for ICAM-1.

REFERENCES

[1]. Vinod KR, Chandra S, Sharma SK. Evaluation of 5-aminoisoquinoline (5-AIQ), a novel PARP-1 inhibitor for genotoxicity potential in vitro and in vivo. Toxicol Mech Methods. 2010 Feb;20(2):90-5.

[2]. Mota-Filipe H, et al. The novel PARP inhibitor 5-aminoisoquinolinone reduces the liver injury caused by ischemia and reperfusion in the rat. Med Sci Monit. 2002 Nov;8(11):BR444-53.

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