Chloroquinoxaline sulfonamide

Cat. No.: HY-106662

CAS No.: 97919-22-7

Molecular Formula: $C_{14}H_{11}ClN_4O_2S$

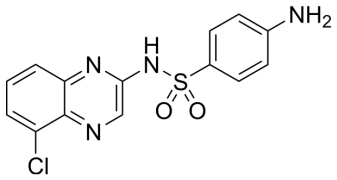
Molecular Weight: 334.78

Target: Topoisomerase; Parasite; Molecular Glues

Pathway: Cell Cycle/DNA Damage; Anti-infection; PROTAC

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 : 125 mg/mL (373.38 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9870 mL	14.9352 mL	29.8704 mL
	5 mM	0.5974 mL	2.9870 mL	5.9741 mL
	10 mM	0.2987 mL	1.4935 mL	2.9870 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: ≥ 2.08 mg/mL (6.21 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.21 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Chloroquinoxaline sulfonamide (Chloroquinoxaline), a structural analogue of sulfaquinoxaline, is a topoisomerase II alpha/beta poison. Chloroquinoxaline sulfonamide is used to control coccidiosis in poultry, rabbit, sheep, and cattle[1]. Antitumor activity[2].

IC_{50} & Target			
	topoisomerase II alpha	topoisomerase II beta	Coccidia

In Vitro

The Chloroquinoxaline sulfonamide IC_{50} for CV-1cells, obtained using an MTT cytotoxicity assay, was 1.8 mM. Chloroquinoxaline sulfonamide causes dose-dependent protein-DNA cross-links to CV-1 monkey kidney cell chromosomal DNA when drug treatment was terminated by lysis with GuHCl. Chloroquinoxaline sulfonamide-induced protein-DNA cross-links in CV-1 cells. Chloroquinoxaline sulfonamide-induced topoisomerase II-DNA cross-links[1].

Chloroquinoxaline sulfonamide (Chloroquinoxaline), a chlorinated derivative of sulfaquinoxaline, inhibits proliferation of murine B16 melanoma cells, but only when relatively high drug concentrations (1 mM) are used[2].

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

Cell Proliferation Assay[2]

Cell Line:	B16 murine melanoma cells
Concentration:	10 μM, 100 μM, 1 mM
Incubation Time:	24, 48, 72 hours
Result:	Inhibited proliferation of murine B16 melanoma cells, but only when relatively high drug concentrations (1 mM) were used.

REFERENCES

[1]. Gao H, et al. Chloroquinoxaline sulfonamide (NSC 339004) is a topoisomerase IIalpha/beta poison. Cancer Res. 2000 Nov 1;60(21):5937-40.

[2]. Branda RF, et al. Cellular pharmacology of chloroquinoxaline sulfonamide and a related compound in murine B16 melanoma cells. Biochem Pharmacol. 1988 Dec 1;37(23):4557-64.

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