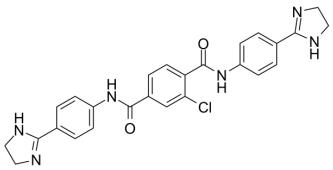
NSC-60339

Cat. No.:	HY-119172
CAS No.:	70-09-7
Molecular Formula:	$C_{26}H_{23}ClN_6O_2$
Molecular Weight:	486.95
Target:	Bacterial
Pathway:	Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 5 mg/mL (10.27 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0536 mL	10.2680 mL	20.5360 mL
	5 mM	0.4107 mL	2.0536 mL	4.1072 mL
	10 mM	0.2054 mL	1.0268 mL	2.0536 mL

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

BIOLOGICAL ACTIVITY

Description

NSC-60339, an efflux pump inhibitor and a substrate of AcrAB-TolC, is a polybasic terephthalic acid derivative studied as a potential cancer chemotherapeutic agent[1][2].

In Vitro

NSC 60339 has been correlated with the sensitivity, resistance, or cross-resistance of 7 tumor lines to phthalanilide treatment in vivo. The sensitive tumors (L1210, L1210/MTX, L1210/ara-C, and P815) rapidly takes up the drug and retained it primarily as lipid-bound drug for the 24-hr experimental period. The resistant tumor, L1210/NSC 60339, and 2 cross-resistant tumors, P388/VCR and P815/VLB, took up as much drug as the sensitive tumors did by 0.5 hr, but there was an efflux of lipid-bound drug from these resistant tumors by 24 hr[3].

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

REFERENCES

[1]. D. W. Yesair, et al. Relationship of Phthalanilide-Lipid Complexes to Uptake and Retention of 2-Chloro-4′,4″-di(2-imidazolin-2-yl)terephthalanilide (NSC 60339) by Sensitive and Resistant P388 Leukemia Cells. CANCER RESEARCH 26 Part 1: 202-207, February 19

[2]. Yesair DW, et al. The retention or efflux of phthalanilide (NSC 60339)-lipid complexes by sensitive or resistant murine tumor cells and Escherichia coli B. Cancer Res. 1968 Feb;28(2):314-9.

[3]. Haynes KM, et al. Identification and Structure-Activity Relationships of Novel Compounds that Potentiate the Activities of Antibiotics in Escherichia coli. J Med Chem. 2017 Jul 27;60(14):6205-6219.

[4]. Abdali N, et al. Reviving Antibiotics: Efflux Pump Inhibitors That Interact with AcrA, a Membrane Fusion Protein of the AcrAB-TolC Multidrug Efflux Pump. ACS Infect Dis. 2017 Jan 13;3(1):89-98.

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