Product Data Sheet

Product Name: NSC-60339
Cat. No.: GC60273

Chemical Properties

Cas. No.	70-09-7		
SMILES	O=C(C1=CC=C(C=C1Cl)C(NC2=CC=C(C=C2)C3=NCCN3)=O)NC4=CC=C(C=C4)C5=NCCN5		
Formula	$C_{26}H_{23}ClN_6O_2$	M.Wt	486.95
Solubility	DMSO: 5 mg/mL (10.27 mM)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	NSC-60339		

Background

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].

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].

[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 1966. [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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