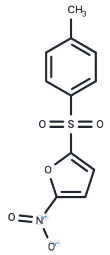
Data Sheet (Cat.No.T6611)

NSC697923

Chemical Properties



CAS No. : 343351-67-7

Formula: C11H9NO5S

Molecular Weight: 267.26

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	NSC-697923 (2-[(4-methylphenyl)sulfonyl]-5-nitrofuran), a potent inhibitor of UBE2N (ubiquitin-conjugating enzyme E2 N, Ubc13), exhibits its role in inducing cell death in neuroblastoma (NB) cells through two distinct mechanisms. In p53 wild-type NB cells, NSC-697923 promotes the nuclear importation of p53, thereby triggering cell death. Meanwhile, in p53 mutant NB cells, NSC-697923 activates the JNK-mediated apoptotic pathway, leading to cell death. Additionally, NSC-697923 inhibits DNA damage and NF-κB signaling, further contributing to its antitumor activity.
Targets(IC50)	E1/E2/E3 Enzyme
In vitro	NSC697923 (0-5 μM; 24 hours) shows cytotoxic effect on NB cell lines. NSC697923 (3μM; 2 hours) can also induce apoptosis in p53 mutant NB cells by activation of JNK-mediated apoptotic pathway. NSC697923 induces apoptosis in p53 wild-type NB cell lines by promoting p53 nuclear translocation and activation[1].
In vivo	NSC697923 (5mg/kg; i.p.; daily for 10 days) suppresses NB tumor growth in SH-SY5Y and NGP xenografts[1].

Solubility Information

Solubility	Ethanol: 6.7 mg/mL (25 mM)),Heating is recommended. DMSO: 180 mg/mL (673.5 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7417 mL	18.7084 mL	37.4167 mL
5 mM	0.7483 mL	3.7417 mL	7.4833 mL
10 mM	0.3742 mL	1.8708 mL	3.7417 mL
50 mM	0.0748 mL	0.3742 mL	0.7483 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Cheng J, et al. A small-molecule inhibitor of UBE2N induces neuroblastoma cell death via activation of p53 and JNK pathways. Cell Death Dis. 2014;5(2):e1079. Published 2014 Feb 20.

Hodge CD, et al. Covalent Inhibition of Ubc13 Affects Ubiquitin Signaling and Reveals Active Site Elements Important for Targeting. ACS Chem Biol. 2015;10(7):1718-1728.