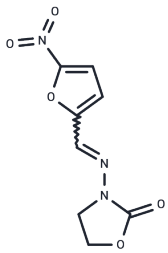
Data Sheet (Cat.No.T0751)

TargetMol

Furazolidone

Chemical Properties



CAS No. : 67-45-8

Formula: C8H7N3O5

Molecular Weight: 225.16

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Furazolidone (Furoxone), a nitrofuran derivative, inhibits AML1-ETO transformed cells with IC50 value of 12.7 μM. It is antibacterial and antiprotozoal activity,
Targets(IC50)	Apoptosis,MAO,Antibacterial,Antibiotic,Parasite
In vitro	Furazolidone displays potent antiproliferative properties at submicromolar concentrations and induces apoptosis in AML cell lines. Furazolidone treatment of certain AML cells induces myeloid cell differentiation by morphology and flow cytometry for CD11b expression, resulting in increased stability of tumor suppressor p53 protein in AML cells[1].
In vivo	FZ accelerates its own metabolism in the chicken by induction of the activity of CPR whereas no effect is observed in the rat[2].
Cell Research	Leukemic cells are seeded in 96-well culture plates at a density of 1 or 2×104 viable cells/100 μl/well in triplicates and are treated for 24, 48, and 72 hours with an incremental concentration of FZD ranging from 1 μM to 50 μM. Colorimetric CellTiter 96® Aqueous One Solution Cell Proliferation assay is used to determine the cytotoxicity. The optical density at 492 nm is measured using a Multiskan Ascent® microplate photometer. IC50 values are determined by MTS assay when cells are treated with FZD for 72 hours and calculated with GraphPad Prism 5. Each experiment was in triplicate. (Only for Reference)

Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 19.07 mg/mL (84.7 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 1.91 mg/mL (8.48 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.4413 mL	22.2064 mL	44.4129 mL
5 mM	0.8883 mL	4.4413 mL	8.8826 mL
10 mM	0.4441 mL	2.2206 mL	4.4413 mL
50 mM	0.0888 mL	0.4441 mL	0.8883 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Jiang X, et al. PLoS One. 2013, 8(8):e72335.
Lai S, Kumari A, Liu J, et al. Chemical screening reveals Ronidazole is a superior prodrug to Metronidazole for nitroreductase-induced cell ablation system in zebrafish larvae. Journal of Genetics and Genomics. 2021
Nobuo Sasaki, et al. Pesticide Biochemistry and Physiology. 2011, 100(2): 135-139.