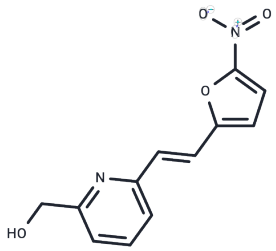
Data Sheet (Cat.No.T74065)

TargetMol

Nifurpirinol

Chemical Properties



CAS No. : 13411-16-0

Formula: C12H10N2O4

Molecular Weight: 246.22

Storage: Keep away from moisture,Store at low temperature
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	Nifurpirinol (P-7138) is an antimicrobial compound that is acutely toxic to milkfish (Chanos chanos) species. Nifurpirinol selectively disrupts the activity of collagen-producing 1alpha2 cells in the Fli//colRN zebrafish line.
Targets(IC50)	Antibacterial,Antibiotic,Topoisomerase
In vitro	Nifurpirinol-treated larvae show more cell debris and large CFP+ cells with a large cytoplasm and irregular nucleus which are presumably phagocytic cells having engulfed apoptotic CFP neurons. Furthermore, Nifurpirinol-treated larvae display much fewer cells with a normal morphology as compared to MTZ treated larvae, underpinning a more efficient ablation with Nifurpirinol. [1]
In vivo	Strong hyperglycemia was detected in fish treated with Nifurpirinol (523 ±113 mg/dl, n=8) as compared to control fish (65 ±13 mg/dl, n=9). This indicates that NFP is able to induce pancreatic beta cell ablation and thus acts as a substrate for NTR-mediated cell ablation. [1]

Solubility Information

Solubility	DMSO: 10 mg/mL (40.61 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (4.06 mM),Sonication is recommended. *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	4.0614 mL	20.307 mL	40.6141 mL
5 mM	0.8123 mL	4.0614 mL	8.1228 mL
10 mM	0.4061 mL	2.0307 mL	4.0614 mL
50 mM	0.0812 mL	0.4061 mL	0.8123 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

Bergemann D, et al. Nifurpirinol: A more potent and reliable substrate compared to metronidazole for nitroreductase-mediated cell ablations. Wound Repair Regen. 2018 Mar;26(2):238-244.