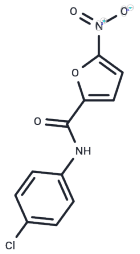
Data Sheet (Cat.No.T60446)

TargetMol

LCS3

Chemical Properties



CAS No. : 109844-92-0

Formula: C11H7ClN2O4

Molecular Weight: 266.64

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	LCS3 is a reversible and non-competitive synergistic inhibitor of glutathione disulfide reductase (GSR) and thioredoxin reductase 1 (TXNRD1) with IC50s of 3.3 μM and 3.8 μM, respectively. LCS3 has antitumour activity, induces apoptosis and can be used in the study of lung adenocarcinoma (LUAD).
Targets(IC50)	Apoptosis,Glutathione reductase
In vitro	LCS3 (5 nM-10 μM ; 96 h) effectively inhibits lung cancer cell lines, while non-transformed lung cells show no signs of inhibition.[1] LCS3 (3 μM ; 3, 6, and 12 h) induces ROS and NRF2 pathway activation in sensitive lung adenocarcinoma (LUAD) cells.[1] LCS3 (3 μM ; 96 h) selectively kills lung adenocarcinoma (LUAD) cell lines, in part through the induction of apoptosis.[1]

Solubility Information

Solubility	DMSO: 112.5 mg/mL (421.92 mM),Sonication and heating to 60°C are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (15 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	3.7504 mL	18.7519 mL	37.5038 mL
5 mM	0.7501 mL	3.7504 mL	7.5008 mL
10 mM	0.375 mL	1.8752 mL	3.7504 mL
50 mM	0.075 mL	0.375 mL	0.7501 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

Johnson FD, et al. Characterization of a small molecule inhibitor of disulfide reductases that induces oxidative stress and lethality in lung cancer cells. Cell Rep. 2022 ; 38(6):110343.
Gallardo-Macias R, et al. Optimization of N-benzyl-5-nitrofuran-2-carboxamide as an antitubercular agent. Bioorg Med Chem Lett. 2019 ; 29(4):601-606.
Perretti M, et al. Acute inflammatory response in the mouse: exacerbation by immunoneutralization of lipocortin 1. Br J Pharmacol. 1996 ; 117(6):1145-1154.

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