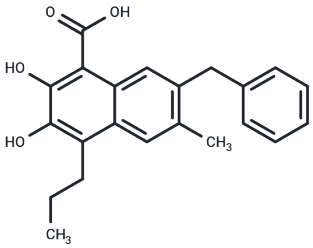
Data Sheet (Cat.No.T15362)

TargetMol

FX-11

Chemical Properties



CAS No. : 213971-34-7

Formula: C22H22O4

Molecular Weight: 350.41

Storage: Store at low temperature,Keep away from moisture
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	FX-11 (LDHA Inhibitor FX11) is A potent, selective and competitive specific inhibitor of lactate dehydrogenase A (LDHA) with a Ki of 8 μM. FX-11 can activate PKM2 (pyruvate kinase M2). FX-11 can reduce ATP levels, induce oxidative stress and ROS production, and cause cell death. FX-11 appeared antitumor activity during xenotransplantation of lymphoma and pancreatic cancer.
Targets(IC50)	Apoptosis,Reactive Oxygen Species,Dehydrogenase,ROS
In vitro	FX-11 (9 μM, 24-48 h) induces activation of AMP kinase and phosphorylation of acetyl-CoA carboxylase, its substrate. FX-11 disrupts glycolysis and modifies cellular energy metabolism in P493 cells. [1] FX-11 (0-100 μM, 72 h) impedes cell proliferation in BxPc-3 and MIA PaCa-2 cells. [2]
In vivo	FX-11 (42 μg/mouse; IP, administered daily for 10-14 days) suppresses P493 tumor growth.[1] FX-11 (0-2 mg/kg, IP, daily, for 3 weeks) notably retards tumor growth.[2]

Solubility Information

Solubility	DMSO: 260 mg/mL (741.99 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: 5 mg/mL (14.27 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	2.8538 mL	14.269 mL	28.538 mL
5 mM	0.5708 mL	2.8538 mL	5.7076 mL
10 mM	0.2854 mL	1.4269 mL	2.8538 mL
50 mM	0.0571 mL	0.2854 mL	0.5708 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

Le A, et al. Inhibition of lactate dehydrogenase A induces oxidative stress and inhibits tumor progression. Proc Natl Acad Sci U S A. 2010;107(5):2037-204

Mohammad GH, et al. Targeting Pyruvate Kinase M2 and Lactate Dehydrogenase A Is an Effective Combination Strategy for the Treatment of Pancreatic Cancer. Cancers (Basel). 2019;11(9):137

Scroggins BT, et al. Hyperpolarized [1-13C]-pyruvate magnetic resonance spectroscopic imaging of prostate cancer In Vivo predicts efficacy of targeting the Warburg effect. Clin Cancer Res 2018;24(13):3137-3148.

Gong Y, et al. Metabolic-Pathway-Based Subtyping of Triple-Negative Breast Cancer Reveals Potential Therapeutic Targets. Cell Metab. 2021;33(1):51-64.