Data Sheet (Cat.No.T22788)

FPL64176

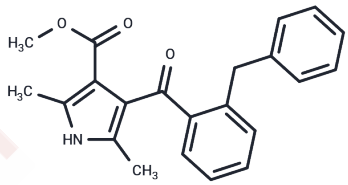
Chemical Properties

CAS No. : 120934-96-5

Formula: C22H21NO3

Molecular Weight: 347.41

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	FPL64176 is a L-type calcium channels activator.
Targets(IC50)	Calcium Channel
In vitro	FPL-64176, on schistosomes cultured ex vivo and in an in vivo murine model of infection.?Unlike DHPs, FPL-64176 evokes rapid and sustained contractile paralysis of adult Schistosoma mansoni reminiscent of the anthelmintic praziquantel.?This is accompanied by tegument disruption and an arrest of mitotic activity in somatic stem cells and germ line tissues.?Interestingly, this strong ex vivo phenotype was temperature dependent, with FPL-64176 treatment being less potent at 37 C than 23 C. However, FPL-64176 caused intra-tegument lesions at the basement membrane of worms cultured ex vivo under both conditions,?as well as an in vivo hepatic shift of parasites from the mesenteric vasculature of infected mice to the liver[1].
In vivo	Gene expression profiling of worms harvested following in vivo FPL-64176 exposure reveals differences in transcripts associated with muscle and extracellular matrix function, as well as female reproduction, which is consistent with the worm phenotypes observed following ex vivo drug treatment[1].

Solubility Information

Solubility	DMSO: 240 mg/mL (690.83 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: 2 mg/mL (5.76 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	2.8784 mL	14.3922 mL	28.7844 mL
5 mM	0.5757 mL	2.8784 mL	5.7569 mL
10 mM	0.2878 mL	1.4392 mL	2.8784 mL
50 mM	0.0576 mL	0.2878 mL	0.5757 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

Mccusker P , Chan J D . Anti-schistosomal action of the calcium channel agonist FPL-64176[J]. International Journal for Parasitology: Drugs and Drug Resistance, 2019, 11.

Li T, Wan Z, Wang Q, et al.Utilizing Tissues Self-Assembled in Fiber Optic-Based “Chinese Guzheng Strings” for Contractility Sensing and Drug Efficacy Evaluation: A Practical Approach.Small.2406144

Wang, Yuchen, Tang, et al. Molecular Determinants of the Differential Modulation of Ca(v)1.2 and Ca(v)1.3 by Nifedipine and FPL 64176[J]. Molecular Pharmacology, 2018.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481