PF429242 dihydrochloride

Cat. No.: HY-13447A

CAS No.: 2248666-66-0

Molecular Formula: $C_{25}H_{37}Cl_2N_3O_2$

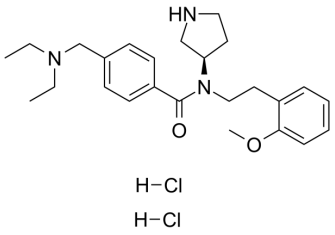
Molecular Weight: 482.49

Target: Fatty Acid Synthase (FASN); Virus Protease

Pathway: Metabolic Enzyme/Protease; Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 83.3 mg/mL (172.65 mM)

H_2O : 50 mg/mL (103.63 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.0726 mL	10.3629 mL	20.7258 mL
5 mM	0.4145 mL	2.0726 mL	4.1452 mL
10 mM	0.2073 mL	1.0363 mL	2.0726 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.18 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.18 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.18 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PF429242 dihydrochloride is a reversible and competitive SREBP site 1 protease (S1P) inhibitor with an IC_{50} of 175 nM[1].

IC_{50} & Target

IC50: 175 nM (S1P)[1]

In Vitro

10 μM PF-429242 inhibits endogenous SREBP processing in Chinese hamster ovary cells. PF-429242 also down-regulates the

	signal from an SRE-luciferase reporter gene in human embryonic kidney 293 cells and the expression of endogenous SREBP target genes in cultured HepG2 cells. In HepG2 cells, PF-429242 inhibits cholesterol synthesis, with an IC_{50} of 0.5 μM[1]. The addition of PF-429242 (30 μM) shows statistically significant suppression of infectious viral titers and viral RNA copies in the cell culture fluids. PF-429242 treatment also shows suppressive effects on DENV2 yields in the cultured fluids of human-derived HEK-293, Hep G2, and non-human-primate derived LLC-MK2 cells[2]. PF-429242 efficiently prevents the processing of GPC from the prototypic arenavirus lymphocytic choriomeningitis virus (LCMV) and LASV, which correlates with the compound's potent antiviral activity against LCMV and LASV in cultured cells[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In mice treated with PF-429242 for 24 h, the expression of hepatic SREBP target genes is suppressed, and the hepatic rates of cholesterol and fatty acid synthesis are reduced[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	Mice: To test the in vivo efficacy of PF-429242 in regulating SREBP target genes, male CD1 mice are dosed i.p. with 10 or 30 mg/kg PF-429242 or saline once every 6 over a 24-h period. Mice are euthanized 6 h after the final dose, and liver tissue is collected, frozen rapidly in liquid nitrogen, and stored at -80°C. For RNA isolation, 50 to 100 mg of frozen liver tissue from each sample is homogenized in 1 ml of TRIzol reagent. Total RNA is extracted following the manufacturer's instructions, and the resulting total RNA from each sample underwent DNA-free treatment[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Immunity. 2018 Nov 20;49(5):842-856.e7.
- Cell Death Differ. 2021 Jan 19.
- Autophagy. 2021 Jul;17(7):1592-1613.
- Hypertension. 2020 Dec 7;HYPERTENSIONAHA12015100.
- JCI Insight. 2019 Apr 4;4(7). pii: 124174.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Hawkins JL, et al. Pharmacologic inhibition of site 1 protease activity inhibits sterol regulatory element-binding protein processing and reduces lipogenic enzyme gene expression and lipid synthesis in cultured cells and experimental animals. J Pharmacol Exp Ther. 2008 Sep;326(3):801-8.

[2]. Uchida L, et al. Suppressive Effects of the Site 1 Protease (S1P) Inhibitor, PF-429242, on Dengue Virus Propagation. Viruses. 2016 Feb 10;8(2). pii: E46. doi: 10.3390/v8020046.

[3]. Urata S, et al. Antiviral activity of a small-molecule inhibitor of arenavirus glycoprotein processing by the cellular site 1 protease. J Virol. 2011 Jan;85(2):795-803.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA