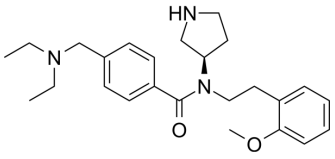
PF-429242

Cat. No.:	HY-13447
CAS No.:	947303-87-9
Molecular Formula:	$C_{25}H_{35}N_3O_2$
Molecular Weight:	409.56
Target:	Fatty Acid Synthase (FASN); Virus Protease
Pathway:	Metabolic Enzyme/Protease; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

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

CUSTOMER VALIDATION

- Nature. 2023 Apr;616(7956):348-356.
- Immunity. 2018 Nov 20;49(5):842-856.e7.
- Autophagy. 2021 Jul;17(7):1592-1613.
- Cell Death Differ. 2021 Jun;28(6):2001-2018.
- Sci China Life Sci. 2021 May 27;1-21.

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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.

[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.

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