

JXL069

Chemical Properties

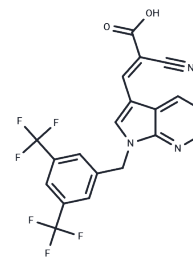
CAS No. : 2260696-63-5

Formula: C₂₀H₁₁F₆N₃O₂

Molecular Weight: 439.31

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	JXL069 is an experimental drug originally developed at the University of California, Los Angeles (UCLA), that functions as a potent and highly selective mitochondrial pyruvate carrier (MPC) inhibitor, effectively disrupting the regulated import of pyruvate into mitochondria, altering cellular energy metabolism, and demonstrating promising preclinical efficacy as a metabolic modulator in androgenetic alopecia through mechanistic validation in animal model studies.
Targets(IC50)	Others
In vitro	In cellular assays, JXL069 inhibits MPC activity with high potency, exhibiting an IC ₅₀ in the nanomolar range (approximately 40-50 nM) [1].
In vivo	In in vivo dermatological models using C57BL/6 mice, JXL069 demonstrates the ability to induce hair growth via topical application. When applied to mice in the telogen phase (characterized by pink skin), the compound triggers a rapid transition to the anagen phase (characterized by dark skin pigmentation). Treated mice exhibit visible hair regrowth significantly faster than vehicle-treated controls, with effects comparable to or potentially exceeding standard treatments like minoxidil [2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2763 mL	11.3815 mL	22.763 mL
5 mM	0.4553 mL	2.2763 mL	4.5526 mL
10 mM	0.2276 mL	1.1381 mL	2.2763 mL
50 mM	0.0455 mL	0.2276 mL	0.4553 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

Liu X, et al. Development of novel mitochondrial pyruvate carrier inhibitors to treat hair loss[J]. Journal of medicinal chemistry, 2021, 64(4): 2046-2063.

Flores A, et al. Lactate dehydrogenase activity drives hair follicle stem cell activation[J]. Nature cell biology, 2017, 19(9): 1017-1026.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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