

HL271

Chemical Properties

CAS No. : 1422365-52-3

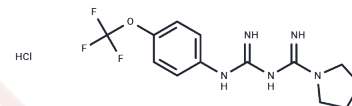
Formula: C₁₃H₁₇ClF₃N₅O

Molecular Weight: 351.76

Keep away from moisture

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	HL271 hydrochloride is a chemical derivative of metformin and a potent AMPK activator that enhances AMPK phosphorylation levels. In animal models, HL271 hydrochloride alleviates age-related cognitive impairment. As an effective inhibitor of oxidative phosphorylation (OXPHOS), HL271 can be used in solid tumor research.
Targets(IC50)	OXPHOS,AMPK
In vitro	Methods: NIH3T3 cells were treated with 10 μM HL271 for 0.5 to 24 hours, and changes in p-AMPK expression were detected using Western blot analysis. Results: HL271 significantly activated AMPK as early as 0.5 hours.[1]
In vivo	Methods: To investigate the effects of HL271 on cognitive decline, aged C57BL/6J mice were administered HL271 orally (dissolved in drinking water) at a dose of 50 mg/kg for 2 months. After 2 months, various memory parameters were assessed in the mice. Results: HL271 (50 mg/kg, administered orally for 2 months) significantly improved novel object recognition memory, spatial working memory, and contextual fear memory in aged mice. [2]

Solubility Information

Solubility	DMSO: 33.34 mg/mL (94.78 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	--

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8428 mL	14.2142 mL	28.4285 mL
5 mM	0.5686 mL	2.8428 mL	5.6857 mL
10 mM	0.2843 mL	1.4214 mL	2.8428 mL
50 mM	0.0569 mL	0.2843 mL	0.5686 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

Row H, Jeong J, Cho S, Kim S, Kim K. HL271, a novel chemical compound derived from metformin, differs from metformin in its effects on the circadian clock and metabolism. *Biochem Biophys Res Commun.* 2016;469(3):783-789.

Bang E, Lee B, Park JO, et al. The Improving Effect of HL271, a Chemical Derivative of Metformin, a Popular Drug for Type II Diabetes Mellitus, on Aging-induced Cognitive Decline. *Exp Neurobiol.* 2018;27(1):45-56.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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