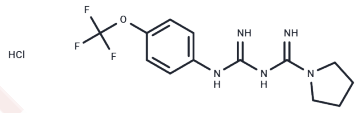
Data Sheet (Cat.No.T11570)

TargetMol

HL271

Chemical Properties



CAS No. : 1422365-52-3

Formula: C13H17ClF3N5O

Molecular Weight: 351.76

Storage: Keep away from direct sunlight
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, a derivative of metformin, is a potent AMPK activator that increases AMPK phosphorylation. HL271 attenuates aging-associated cognitive impairment.
Targets(IC50)	OXPHOS,AMPK
In vitro	HL271 does not affect the expression of key factors involved in glucose homeostasis such as glucose-6-phosphatase (G6pase) or phosphoenolpyruvate carboxykinase 1 (Pck1).HL271 (0.31-10 μM) phosphorylates AMPKα1 Thr172 in a dose- and time-dependent manner in NIH3T3 mouse fibroblast cells.
In vivo	HL271 significantly attenuates the aging-induced decline in novel object recognition memory and spatial working memory. HL271 significantly increases AMPK activation in the hippocampus of aged mice.HL271 does not affect metabolic regulation assessed by body weight, blood glucose, insulin levels and lipid metabolite content in mice with diet-induced obesity.?HL271 (50 mg/kg;?for 2 months) does not affect body weight, general locomotion, or anxiety.

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, et al. 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 Jan 15;469(3):783-9.
Bang E, 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 Feb;27(1):45-56.

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