

AMPK activator 4

Chemical Properties

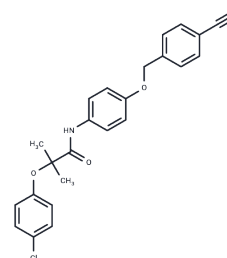
CAS No. : 2493239-46-4

Formula: C₂₄H₂₁ClN₂O₃

Molecular Weight: 420.89

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	AMPK activator 4 is a potent and selective AMPK activator that does not inhibit mitochondrial complex I. It selectively activates AMPK in muscle tissue, dose-dependently improves glucose tolerance in normal mice, significantly reduces fasting glucose levels, and improves insulin resistance in db/db diabetic mice. [AMPK activator 4 has hypoglycemic effects.]
Targets(IC50)	AMPK
In vitro	AMPK activator 4 (compound B10) (10-20 µM; 72 h) slightly decreases the viability of HepG2 cells. [1] AMPK activator 4 (0-20 µM; 12-24 h) induces dose-dependent phosphorylation of ACC in C2C12 myotube cells, with this phosphorylation being consistent with AMPK phosphorylation. Additionally, it increases AMPK and ACC phosphorylation in HepG2 and HuH-7 cells. [1]
In vivo	AMPK activator 4 (100 mg/kg; intragastrical administration; daily for 9 weeks; db/db mice) significantly lowered fasting blood glucose in db/db mice (2-6 weeks) and significantly improved insulin resistance (for 9 weeks), without significantly affecting body weight or serum levels of alanine aminotransferase (ALT) and aspartate aminotransferase (AST), demonstrating an anti-hyperglycemic effect.[1]

Solubility Information

Solubility	DMSO: 50 mg/mL (118.8 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3759 mL	11.8796 mL	23.7592 mL
5 mM	0.4752 mL	2.3759 mL	4.7518 mL
10 mM	0.2376 mL	1.188 mL	2.3759 mL
50 mM	0.0475 mL	0.2376 mL	0.4752 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.

Reference

Sun G, et al. Discovery of AdipoRon analogues as novel AMPK activators without inhibiting mitochondrial complex I. Eur J Med Chem. 2020;200:112466.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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