

Shizukaol D

Chemical Properties

CAS No.:	142279-42-3
Formula:	C33H38O9
Molecular Weight:	578.7
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	Shizukaol D exerts a growth inhibition effect on liver cancer cells in a dose- and time-dependent manner by modulating wnt signalling pathway. Shizukaol D may be used to treat metabolic syndrome, it induces mitochondrial dysfunction by depolarizing the mitochondrial membrane and suppressing energy production, which may result in AMPK activation.
Targets(IC ₅₀)	AMPK: None
In vitro	METHODS AND RESULTS: This study is the first to demonstrate that Shizukaol D, a natural compound isolated from <i>Chloranthus japonicus</i> , can activate AMP-activated protein kinase (AMPK), a key sensor and regulator of intracellular energy metabolism, leading to a decrease in triglyceride and cholesterol levels in HepG2 cells. Furthermore, we found that Shizukaol D induces mitochondrial dysfunction by depolarizing the mitochondrial membrane and suppressing energy production, which may result in AMPK activation. CONCLUSIONS: Our results provide a possible link between mitochondrial dysfunction and AMPK activation and suggest that Shizukaol D might be used to treat metabolic syndrome.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.728 mL	8.640 mL	17.280 mL
5 mM	0.346 mL	1.728 mL	3.456 mL
10 mM	0.173 mL	0.864 mL	1.728 mL
50 mM	0.035 mL	0.173 mL	0.346 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Shizukaol D isolated from *Chloranthus japonicas* inhibits AMPK-dependent lipid content in hepatic cells by inducing mitochondrial dysfunction. PLoS One. 2013 Aug 14;8(8):e73527.

Inhibitors · Natural Compounds · Compound Libraries

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