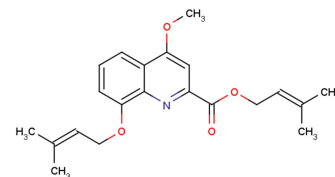


Ppc-1

Chemical Properties

CAS No.:	1245818-17-0
Formula:	C ₂₁ H ₂₅ NO ₄
Molecular Weight:	355.43
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	Ppc-1 inhibits the Gram-negative periodontopathogen <i>Porphyromonas gingivalis</i> . Ppc-1 is a mitochondrial uncoupler. Ppc-1 is a cell-permeate interleukin-2 (IL-2) inhibitor. Ppc-1 enhances mitochondrial oxygen consumption without adverse effects on ATP production. Ppc-1 has anti-obesity, antibacterial and anti-inflammatory activities.
Targets(IC ₅₀)	Mitochondrial;Interleukin-2 (IL-2): None
In vitro	Ppc-1 inhibits the growth of K562 cells (EC ₅₀ : 13 μM). Ppc-1 displays about 50% inhibition at 15 μM in all cell lines. Ppc-1 has antiproliferative activities in K562 human leukemia, Hela cervical carcinoma, and 3T3-L1 mouse embryonic fibroblast cells. Ppc-1 treatment (0-10 μM; 24 hours; Jurkat cells) significantly inhibits IL-2 production in Jurkat cells (IC ₅₀ : 4 μM). Using the U937-3xκB-LUC human monocytic cell line, Ppc-1 dose-dependently inhibits the lipopolysaccharide-induced NF-κB activation[2][3][4].
In vivo	Ppc-1 distributes into various tissues of individual animals at low levels after a single administration. Ppc-1 stimulates adipocytes in culture to release fatty acids, which might explain the elevated serum fatty acids in Ppc-1-treated mice. Ppc-1 (0-10 mg /kg; Intraperitoneal injection; once a week; for 8 weeks; female ICR mice) treatment inhibits weight gain with no abnormal effects on liver or kidney tissues, and no evidence of tumor formation. Serum fatty acid levels are significantly elevated in mice treated with Ppc-1, while body fat content remained low [1].

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	2.813 mL	14.067 mL	28.135 mL
5 mM	0.563 mL	2.813 mL	5.627 mL
10 mM	0.281 mL	1.407 mL	2.813 mL
50 mM	0.056 mL	0.281 mL	0.563 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. Suzuki T, et al. Weight loss by Ppc-1, a novel small molecule mitochondrial uncoupler derived from slime mold. PLoS One. 2015 Feb 10;10(2):e0117088.
2. Ogura M, et al. Prenylated quinolinecarboxylic acid derivative suppresses immune response through inhibition of PAK2. Biochem Pharmacol. 2016 Apr 1;105:55-65.
3. Haruhisa Kikuchi a, et al. Novel prenylated and geranylated aromatic compounds isolated from Polysphondylium cellular slime molds. Tetrahedron 66 (2010) 6000-6007.
4. Azelmat J, et al. Antibacterial and Anti-inflammatory Activities of Ppc-1, Active Principle of the Cellular Slime Mold Polysphondylium pseudo-candidum. Med Chem. 2015;11(7):666-9.

Inhibitors · Natural Compounds · Compound Libraries

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Tel:781-999-4286

E-mail:info@targetmol.com

Address:36 Washington Street,Wellesley Hills,MA 02481