Praeruptorin B

Cat. No.: HY-N0082

CAS No.: 73069-28-0

Molecular Formula: $C_{24}H_{26}O_7$

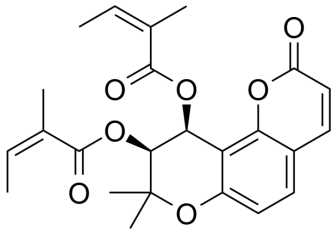
Molecular Weight: 426.46

Target: Fatty Acid Synthase (FASN)

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (58.62 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3449 mL	11.7244 mL	23.4489 mL
5 mM	0.4690 mL	2.3449 mL	4.6898 mL
10 mM	0.2345 mL	1.1724 mL	2.3449 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (5.86 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.86 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Praeruptorin B is an inhibitor of sterol regulatory element-binding proteins (SREBPs).

IC_{50} & Target

SREBP[1].

In Vitro

Praeruptorin B inhibits the SREBPs activity and decreases intracellular lipid levels. Praeruptorin B is found to powerfully decrease the SRE-luciferase activity, and this effect is dose dependent. Praeruptorin B shows negligible cytotoxicity, even at the higher concentration. Praeruptorin B also significantlytly down-regulates the expression of SREBP-1c and SREBP-2[1]. Praeruptorin B also exhibits significant inhibition on the activity of UGT1A9[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo	The mice treated with Praeruptorin B (50 mg/kg) are significantly lighter than the vehicle treated mice, although they are still heavier than the chow diet-fed mice, suggesting that Praeruptorin B can ameliorate diet-induced obesity (DIO). More importantly, the fat/lean and fat/body-weight ratios are obviously dropped at the same dosage of Praeruptorin B treated mice. It is also showed that the serum TC and TG levels of Praeruptorin B treated mice are significantly lower than those of the HFD-fed mice. Praeruptorin B increases HDL-c and decreases LDL-c similar as lovastatin. In addition, compared with vehicle treated mice, Praeruptorin B significantly lowers the level of TC and TG in liver, comparable to lovastatin. The staining results reveal that Praeruptorin B-treated mice exhibit less lipid accumulation than that of vehicle treated mice. The elevated fasting blood glucose and insulin in HFD-fed mice are significantly reduced by Praeruptorin B[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	HepG2 cells and HL-7702 cells are used in the study. Cell proliferation is determined by the MTT assays. The HepG2 cells are seeded in 96-well plates with 2.0×10^4 cells per well in DMEM containing 10% FBS for 24 h. Cells are further treated with Praeruptorin B (0, 2.5, 5, 10, 20, 40, 80 μM) for 18 h[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration [1]	Mice[1] Sixweek-old male C57BL/6J mice are housed in colony cages and maintained on a light/dark cycle. On a caloric basis, the HFD contains 60% fat, 20.6% carbohydrate and 19.4% protein, whereas the normal diet contains 13% fat, 60% carbohydrate and 27% protein. The mice are randomly divided into the following four groups (n=6 per group): vehicle-treated chow group, vehicle-treated HFD group, lovastatin-treated HFD group (30 mg per kg per day) and Praeruptorin B-treated HFD group (25 or 50 mg per kg per day). HFD-fed mice are gavaged with Praeruptorin B or lovastatin dissolved in 0.5% CMC-Na for 6 weeks[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Zu-Guo Zheng, et al. Praeruptorin B improves diet-induced hyperlipidemia and alleviates insulin resistance via regulating SREBP signaling pathway. RSC Adv., 2018, 8, 354–366

[2]. Liu X, et al. The Inhibition of UDP-Glucuronosyltransferase (UGT) Isoforms by Praeruptorin A and B. Phytother Res. 2016 Nov;30(11):1872-1878.

Caution: Product has not been fully validated for medical applications. For research use only.

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