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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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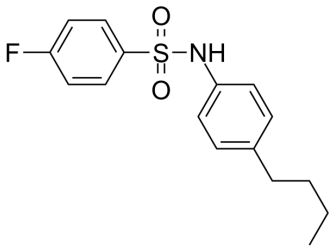
DC260126

Cat. No.:	HY-101906
CAS No.:	346692-04-4
Molecular Formula:	$C_{16}H_{18}FNO_2S$
Molecular Weight:	307.38
Target:	Free Fatty Acid Receptor; Apoptosis
Pathway:	GPCR/G Protein; Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (325.33 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.2533 mL	16.2665 mL	32.5330 mL
5 mM	0.6507 mL	3.2533 mL	6.5066 mL
10 mM	0.3253 mL	1.6267 mL	3.2533 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (8.13 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (8.13 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.13 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

DC260126 is a potent antagonist of GPR40 (FFAR1). DC260126 dose-dependently inhibits GPR40-mediated Ca^{2+} elevations stimulated by linoleic acid, oleic acid, palmitoleic acid and lauric acid (IC_{50}: 6.28, 5.96, 7.07, 4.58 μM, respectively)[1]. DC260126 could protect MIN6 β cells from palmitate-induced ER stress and apoptosis[2].

In Vitro

DC260126 reduces GTP-loading and ERK1/2 phosphorylation stimulated by linoleic acid in GPR40-CHO cells, suppresses palmitic acid potentiated glucose-stimulated insulin secretion, and negatively regulates GPR40 mRNA expression induced

by oleic acid in Min6 cells[1].

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

PROTOCOL

Animal Administration [1][2]

Mice[1]

Male C57BL/KsJ-Lep^{db} (db/db) are maintained in a 12 h light-dark cycle at a temperature of 23°C with free access to water and regular chow diet. To investigate the dose-dependent effect of DC260126, nine-week-old db/db male mice are divided into four groups (n=6/group). Mice are give vehicle (5% DMSO in PBS) or DC260126 (3, 10, 30 mg/kg) once daily by tail vein injection for 5 days. At day 5, each group of mice are fasted for 6 h and blood samples are collected from orbital venous plexus and centrifuged for serum separation. Then the concentration of serum insulin level is measured by ELISA kit. For long term experiments, six-week-old obese db/db male mice are divided into two groups (n=8/group) and given vehicle (5% DMSO in PBS) or DC260126 (10 mg/kg) once daily by tail vein injection for 24 days, respectively.

Rats[2]

Female obese (fa/fa) Zucker rats are maintained in a 12:12 light-dark cycle with free access to water and a high-fat diet containing 15% fat, 1% cholesterol, 0.5% sodium cholate and 15% sucrose, except when fasted before some experiments. Rats at 8 weeks of age are divided into two groups (n=6/group) on the basis of body weight. Rats are injected intraperitoneally once daily with vehicle (propylene glycol) or DC260126 (6 mg/kg) for 8 weeks. Food intake and body weight are monitored periodically. At the end of the experimental period, mice are fasted for 12 h and then blood is collected. Liver, renal, adipose tissues are rapidly excised and weighed. Liver samples are snap frozen in liquid nitrogen and stored at -80°C for western blotting analysis.

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

CUSTOMER VALIDATION

- Respir Res. 2023 Feb 17;24(1):56.
- Pediatr Allergy Immunol. 2021 Aug 12.

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REFERENCES

[1]. Hu H, et al. A novel class of antagonists for the FFAs receptor GPR40. Biochem Biophys Res Commun. 2009;390(3):557-563.

[2]. Wu J, et al. Inhibition of GPR40 protects MIN6 β cells from palmitate-induced ER stress and apoptosis [published correction appears in J Cell Biochem. 2013 May;114(5):1216]. J Cell Biochem. 2012;113(4):1152-1158.

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