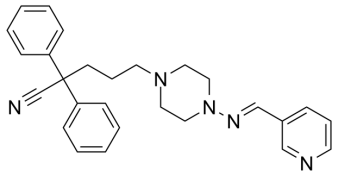
SC-26196

Cat. No.:	HY-107410
CAS No.:	218136-59-5
Molecular Formula:	$C_{27}H_{29}N_5$
Molecular Weight:	423.55
Target:	Others
Pathway:	Others
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 : 5 mg/mL (11.80 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3610 mL	11.8050 mL	23.6100 mL
	5 mM	0.4722 mL	2.3610 mL	4.7220 mL
	10 mM	0.2361 mL	1.1805 mL	2.3610 mL

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

BIOLOGICAL ACTIVITY

Description

SC-26196 is a potent, orally active Delta6 desaturase (D6D, FADS2) inhibitor (IC_{50}=0.2 μM in a rat liver microsomal assay). Antiinflammatory properties[1].

IC_{50} & Target

IC50: 0.2 μM (Delta6 desaturase in a rat liver microsomal assay)[1]

In Vitro

SC-26196 (200 nM) inhibits proliferation of peripheral blood mononuclear cells (PBMCs), but Not Jurkat Cells[2].

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

Cell Proliferation Assay[2]

Cell Line:	PBMCs and Jurkat cells
Concentration:	200 nM
Incubation Time:	96 hours for PBMCs; 144 hours for Jurkat cells

Result:	Treatment of PBMCs significantly decreased the proportion of cells that underwent division, the division index and proliferation index. Did not alter cell proliferation significantly in Jurkat cells.

In Vivo

SC-26196 (included in the diet at 0, 0.07, 0.21, or 0.7 mg/kg diet to achieve dosages of 0, 10, 30, and 100 mg/kg per day) causes a decrease in the calculated Δ6-desaturase index in both adipose tissue and liver. Feeding 100 mg SC-26196 per kg BW per day inhibits the Δ6-desaturase enzyme[3].

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

Animal Model:	Male mice (12- or 15-week-old)[3]
Dosage:	0, 10, 30, and 100 mg/kg per day
Administration:	Included in the diet at 0, 0.07, 0.21, or 0.7mg/kg diet to achieve dosages of 0, 10, 30, and 100mg/kg per day.
Result:	Caused a decrease in the calculated Δ6-desaturase index in both adipose tissue and liver.

REFERENCES

[1]. Obukowicz MG, et al. Novel, selective delta6 or delta5 fatty acid desaturase inhibitors as antiinflammatory agents in mice. J Pharmacol Exp Ther. 1998 Oct;287(1):157-66.

[2]. Sibbons CM, et al. Polyunsaturated Fatty Acid Biosynthesis Involving Δ8 Desaturation and Differential DNA Methylation of FADS2 Regulates Proliferation of Human Peripheral Blood Mononuclear Cells. Front Immunol. 2018 Mar 5;9:432.

[3]. Hargrave-Barnes KM, et al. Conjugated linoleic acid-induced fat loss dependence on Delta6-desaturase or cyclooxygenase. Obesity (Silver Spring). 2008 Oct;16(10):2245-52.

[4]. Zhang L, et al. A multiplexed cell assay in HepG2 cells for the identification of delta-5, delta-6, and delta-9desaturase and elongase inhibitors. J Biomol Screen. 2010 Feb;15(2):169-76.

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