TC LPA5 4

Cat. No.: HY-107615

CAS No.: 1393814-38-4

Molecular Formula: $C_{23}H_{23}ClN_2O_3$

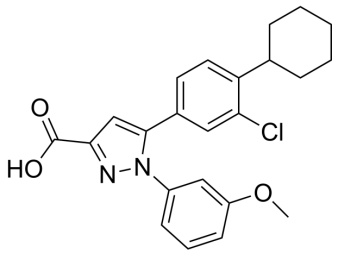
Molecular Weight: 410.89

Target: LPL Receptor

Pathway: GPCR/G Protein

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (152.11 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4337 mL	12.1687 mL	24.3374 mL
	5 mM	0.4867 mL	2.4337 mL	4.8675 mL
	10 mM	0.2434 mL	1.2169 mL	2.4337 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: ≥ 2.08 mg/mL (5.06 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.06 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

TC LPA5 4 is a LPA_5 (GPR92)-specific non-lipid antagonist. TC LPA5 4 inhibits LPA-induced aggregation of isolated human platelet (LPA_5-RH7777 cell line) with an IC_{50} of 800 nM. TC LPA5 4 displays selectivity for LPA_5 over 80 other screened agent targets[1]. TC LPA5 4 inhibits cell proliferation and migration of thyroid cancer cells[2].

In Vitro

TC LPA5 4 inhibits the proliferation on thyroid cancer cells CGTH-W3, TPC-1, B-CAPAP, and BHT101 significantly with IC_{50} at 103.0 μM, 84.9 μM, 55.9μM, and 57.17 μM. TC LPA5 4 (5 μM; 24 hours) significantly inhibits LPA-stimulated migration of CGTH-W3 and TPC-1 cells, with an inhibitory rate of ~ 30%. B-CPAP and BHT101 cells expressed higher LPAR5 mRNA. TC LPA5 4 inhibits these two cell lines' proliferations with IC_{50} at 55.9μM and 57.17 μM. CGTH-W3 and TPC-1 cells expressed lower LPAR5 mRNA. TC LPA5 4 displays differential antitumor activity with IC_{50} at 103.0 μM and 84.9 μM[2].

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

In Vivo

TC LPA5 4 (10 mg/kg; intraperitoneal injection; 5 days/week for 2 weeks) could delay CGTH-W3 xenograft growth in nude mice[2].

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

Animal Model:	BALB/C nu/nu mice, aged 4 5 weeks (CGTH-W3 xenografts) [2]
Dosage:	10 mg/kg
Administration:	Intraperitoneal injection; 5 days/week for 2 weeks
Result:	Significantly inhibits CGTH-W3 xenograft growth with inhibitory rates of 46.7%.

REFERENCES

[1]. Kozian DH, et al. Selective non-lipid modulator of LPA5 activity in human platelets. Bioorg Med Chem Lett. 2012;22(16):5239-5243.

[2]. Zhao WJ, et al. LPAR5 promotes thyroid carcinoma cell proliferation and migration by activating class IA PI3K catalytic subunit p110β. Cancer Sci. 2021;112(4):1624-1632.

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