TRPM4-IN-1

Cat. No.: HY-122605

CAS No.: 351424-20-9

Molecular Formula: $C_{15}H_{11}Cl_2NO_4$

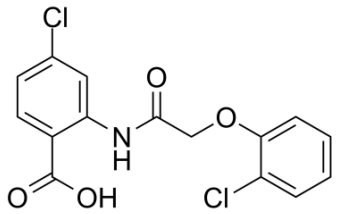
Molecular Weight: 340.16

Target: TRP Channel

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

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 : 83.33 mg/mL (244.97 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9398 mL	14.6990 mL	29.3979 mL
	5 mM	0.5880 mL	2.9398 mL	5.8796 mL
	10 mM	0.2940 mL	1.4699 mL	2.9398 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

TRPM4-IN-1 (CBA) is a potent and selective inhibitor of the cation channel TRPM4, with an IC_{50} of 1.5 μM. TRPM4-IN-1 can be used for the research of cardiac diseases and prostate cancer[1][2].

In Vitro

TRPM4-IN-1 (compound 5) is a potent and selective inhibitor of TRPM4 current in TRPM4 overexpressed HEK293 cells[1].
TRPM4-IN-1 reversibly blocks endogenous TRPM4 currents in LNCaP (prostate cancer) cells[1].
TRPM4-IN-1 (50 μM; Overnight) restores functional expression of A432T, a loss-of-expression TRPM4 variant[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	HEK293 cells
Concentration:	50 μM

Incubation Time:	Overnight
Result:	Partial rescued the total and surface expression of A432T.

REFERENCES

[1]. Lijo Cherian Ozhathil, et al. Identification of potent and selective small molecule inhibitors of the cation channel TRPM4. Br J Pharmacol. 2018 Jun; 175(12): 2504–2519.

[2]. Clémence Delalande, et al. Optimizing TRPM4 inhibitors in the MHFP6 chemical space. Eur J Med Chem. 2019 Mar 15;166:167-177.

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