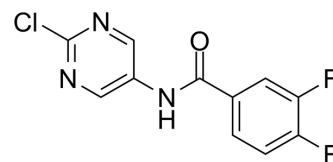


ICA-069673

Cat. No.:	HY-101396												
CAS No.:	582323-16-8												
Molecular Formula:	C ₁₁ H ₆ ClF ₂ N ₃ O												
Molecular Weight:	269.63												
Target:	Potassium Channel												
Pathway:	Membrane Transporter/Ion Channel												
Storage:	<table border="0"> <tr> <td>Powder</td> <td>-20°C</td> <td>3 years</td> </tr> <tr> <td></td> <td>4°C</td> <td>2 years</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>2 years</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 year</td> </tr> </table>	Powder	-20°C	3 years		4°C	2 years	In solvent	-80°C	2 years		-20°C	1 year
Powder	-20°C	3 years											
	4°C	2 years											
In solvent	-80°C	2 years											
	-20°C	1 year											



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (185.44 mM; Need ultrasonic)

Concentration	Solvent	Mass	1 mg			5 mg			10 mg		
			Concentration			Concentration			Concentration		
Preparing Stock Solutions	1 mM		3.7088 mL		18.5439 mL		37.0879 mL				
	5 mM		0.7418 mL		3.7088 mL		7.4176 mL				
	10 mM		0.3709 mL		1.8544 mL		3.7088 mL				

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: 2.5 mg/mL (9.27 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: 2.5 mg/mL (9.27 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: 2.5 mg/mL (9.27 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

ICA-069673 is a KCNQ2/Q3 potassium channel activator. ICA-069673 demonstrates greater selectivity for KV7.2/7.3 over KV7.3/KV7.5, with EC₅₀s of 0.69 μM and 14.3 μM, respectively. ICA-069673 inhibits spontaneous phasic and nerve-evoked contractions in guinea pig detrusor smooth muscle (DSM). ICA-069673 also decreases the global intracellular Ca²⁺ concentration in DSM cells^{[1][2]}.

IC₅₀ & Target

IC₅₀: 0.69 μM (KV7.2/7.3), 14.3 μM (KV7.3/7.5)^[1]

In Vitro

ICA-069673 (100 nM-30 μ M) dose-dependently inhibits spontaneous phasic contraction, pharmacologically induced contraction, and 10 Hz EFS induced nerve-evoked contraction, in guinea pig DSM isolated strips^[1].

ICA-069673 (3 μ M, 10 μ M) inhibits 20 mM KCl induced DSM tonic contractions in guinea pig DSM isolated strips^[1].

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

CUSTOMER VALIDATION

- Acta Pharmacol Sin. 2023 Mar 17.
- Research Square Print. September 6th, 2022

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Provence A, et al. The Novel KV7.2/KV7.3 Channel Opener ICA-069673 Reveals Subtype-Specific Functional Roles in Guinea Pig Detrusor Smooth Muscle Excitability and Contractility. J Pharmacol Exp Ther. 2015 Sep;354(3):290-301.

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

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