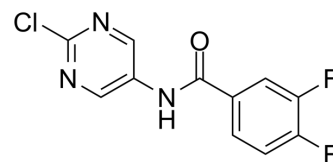


ICA-069673

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:	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
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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