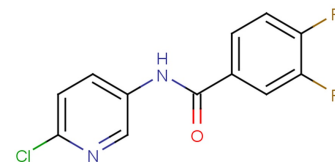


ICA-27243

Chemical Properties

CAS No.:	325457-89-4
Formula:	C ₁₂ H ₇ ClF ₂ N ₂ O
Molecular Weight:	268.65
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	ICA-27243 is less effective at activating KCNQ4 and KCNQ3/Q5. ICA-27243 is a potent and orally active KCNQ2/Q3 potassium channel opener (EC ₅₀ : 0.38 μM). ICA-27243 also has antiepileptic and anticonvulsant effects.
Targets(IC ₅₀)	KCNQ2/Q3 potassium channel: (EC ₅₀)0.38 μM
In vitro	ICA-27243 increases both 86Rb ⁺ efflux (EC ₅₀ : 0.2 μM) and whole-cell currents in Chinese hamster ovary cells stably expressing heteromultimeric KCNQ2/Q3 channels (EC ₅₀ : 0.4 μM). ICA-27243 produces membrane potential hyperpolarization that could be prevented by coadministration with the M-current inhibitors XE-991 and Linopirdine, in SH-SY5Y human neuroblastoma cells [1].
In vivo	In the mouse maximal electroshock epilepsy model, ICA-27243 (1-100 mg/kg; p.o.; male CD-1 mice) has anticonvulsant activity (ED ₅₀ : 8.4 mg/kg) [1].

Solubility Information

Solubility	DMSO: 247 mg/mL (919.41mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.722 mL	18.612 mL	37.223 mL
5 mM	0.744 mL	3.722 mL	7.445 mL
10 mM	0.372 mL	1.861 mL	3.722 mL
50 mM	0.074 mL	0.372 mL	0.744 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

- Wickenden AD, et al. N-(6-chloro-pyridin-3-yl)-3,4-difluoro-benzamide (ICA-27243): a novel, selective KCNQ2/Q3 potassium channel activator. *Mol Pharmacol.* 2008 Mar;73(3):977-86.
- Amato G, et al. N-Pyridyl and Pyrimidine Benzamides as KCNQ2/Q3 Potassium Channel Openers for the Treatment of Epilepsy. *ACS Med Chem Lett.* 2011 Mar 31;2(6):481-4.

Inhibitors · Natural Compounds · Compound Libraries

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