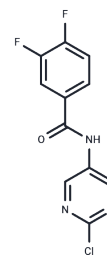


ICA-069673

Chemical Properties

CAS No. : 582323-16-8
 Formula: C₁₁H₆ClF₂N₃O
 Molecular Weight: 269.63
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

| | |
|----------------------------|--|
| Description | ICA-069673 is an activator of KCNQ2/Q3 potassium channel (IC ₅₀ : 0.69 μM). |
| Targets(IC ₅₀) | Potassium Channel |
| In vitro | ICA-069673 is 20-fold selective for KCNQ2/Q3 over KCNQ3/Q5. It has no inhibitory activity against a panel of cardiac ion channels (IC ₅₀ > 30 μM for hERG, Nav1.5, L type channels, and KCNQ1). ICA-069673 (10 μM) has no activity on GABA(A) gated channels. ICA-069673 exhibits much stronger effects on KCNQ2 channels, including a large hyperpolarizing shift of the voltage-dependence of activation, a 2-fold enhancement of peak current and pronounced subtype specificity for KCNQ2 over KCNQ3. |

Solubility Information

| | |
|---------------------|---|
| Solubility | DMSO: 50 mg/mL (185.44 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (7.42 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i> |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|------------|------------|
| 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 |
| 50 mM | 0.0742 mL | 0.3709 mL | 0.7418 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

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. Epub 2007 Dec 18.

Wang AW, et al. Sequence determinants of subtype-specific actions of KCNQ channel openers. *J Physiol.* 2017 Feb 1;595(3):663-676.

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