

RO-275

Chemical Properties

CAS No. : 2648837-04-9

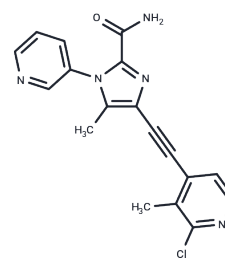
Formula: C₁₈H₁₄ClN₅O

Molecular Weight: 351.79

Store at low temperature

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	RO-275 is a selective HCN1 inhibitor with oral activity, also inhibiting HCN2, HCN3, and HCN4. It improves working memory and is used in research on cognitive disorders.
Targets(IC50)	HCN Channel
In vitro	RO-275 (compound 29) is a potent, selective and orally active HCN1 inhibitor with IC50 values of 0.046, 14.3, 4.6 and 13.9 μ M for HCN1, HCN2, HCN3 and HCN4, respectively. [1]
In vivo	RO-275 (3, 10 and 30 mg/kg, intraperitoneally injected) can save the reduction of working memory in rats. [1]

Solubility Information

Solubility	DMSO: 4 mg/mL (11.37 mM), Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8426 mL	14.213 mL	28.426 mL
5 mM	0.5685 mL	2.8426 mL	5.6852 mL
10 mM	0.2843 mL	1.4213 mL	2.8426 mL
50 mM	0.0569 mL	0.2843 mL	0.5685 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

Harde E, et al. Selective and brain-penetrant HCN1 inhibitors reveal links between synaptic integration, cortical function, and working memory. Cell Chem Biol. 2024 Mar 21;31(3):577-592.e23.

Bjoern Bartels, et al. Alkynyl-(heteroaryl)-carboxamide hcn1 inhibitors. WO2021110574A1.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481