

YM-244769

Chemical Properties

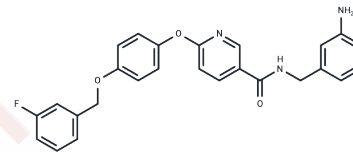
CAS No. : 838819-70-8

Formula: C₂₆H₂₂FN₃O₃

Molecular Weight: 443.47

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	YM-244769 (3-Pyridinecarboxamide, N-[(3-aminophenyl)methyl]-6-[4-[(3-fluorophenyl)methoxy]phenoxy]-) is an effective inhibitor of Na ⁺ /Ca ²⁺ exchange 3 (NCX3) with an IC ₅₀ of 18 nM. YM-244769 has efficient protective effects on neurons and kidneys.
Targets(IC ₅₀)	Calcium Channel, Na ⁺ /Ca ²⁺ Exchanger
In vitro	YM-244769 (0.3 or 1 μM) efficiently suppresses the hypoxia/reoxygenation-induced cell damage in SH-SY5Y cells treated with NCX1 antisense (i.e., SH-SY5Y cells primarily expressing NCX3) more than in those treated with NCX3 antisense (i.e., SH-SY5Y cells primarily expressing NCX1). YM-244769 (0.003-1 μM) inhibits the initial rates of 45 Ca ²⁺ uptake into NCX1, NCX2, and NCX3 transfectants with IC ₅₀ values of 68±2.9, 96±3.5, and 18±1.0 nM, respectively, indicating that YM-244769 is approximately four to five times more selective to NCX3 than other isoforms[1].

Solubility Information

Solubility	DMSO: 245 mg/mL (552.46 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (7.44 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	2.2549 mL	11.2747 mL	22.5494 mL
5 mM	0.451 mL	2.2549 mL	4.5099 mL
10 mM	0.2255 mL	1.1275 mL	2.2549 mL
50 mM	0.0451 mL	0.2255 mL	0.451 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

Takahiro Iwamoto, et al. YM-244769, a Novel Na⁺/Ca²⁺ Exchange Inhibitor That Preferentially Inhibits NCX3, Efficiently Protects Against hypoxia/reoxygenation-induced SH-SY5Y Neuronal Cell Damage. Mol Pharmacol. 2006 Dec;70(6):2075-83.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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