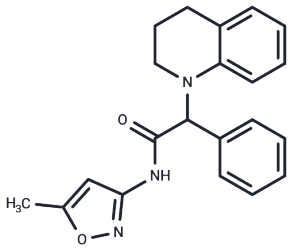
Data Sheet (Cat.No.T9263)

TargetMol

cim0216

Chemical Properties



CAS No. : 1031496-06-6

Formula: C21H21N3O2

Molecular Weight: 347.41

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	CIM0216 is a synthetic TRPM3 activator whose potency and apparent affinity greatly exceeds that of the canonical TRPM3 agonist.
Targets(IC50)	TRP/TRPV Channel
In vitro	CIM0216 Selectively Activates TRPM3 in Stably Transfected HEK293 Cells.A diverse small-molecule library was screened for compounds that modulate TRPM3-mediated Ca2+ responses in HEK293 cells stably expressing murine TRPM3 (HEK-TRPM3 cells), as described previously[1].In HEK-TRPM3 cells, CIM0216 elicited a dose-dependent Ca2+ response [negative logarithm of the EC50 value (pEC50) = 0.77 ± 0.1 μM], which was not observed in nontransfected HEK293 cells . The endogenous TRPM3 activator pregnenolone sulfate (PS) also elicited a dose-dependent Ca2+ response, typified by a smaller Ca2+ influx and a fivefold lower potency (pEC50 = 3.0 ± 0.1 μM; n = 2) compared with CIM0216 . In the presence of 40 μM PS, the dose dependency of CIM0216 shifted to a lower concentration in HEK-TRPM3 cells (pEC50 = 42 ± 0.6 nM CIM0216 in the presence of PS). Single-cell FURA2-ratiometric Ca2+ imaging revealed a robust increase in intracellular Ca2+ concentration (1,145 ± 26 nM; n = 603 from at least three independent measurements) on stimulation with 1 μM CIM0216 in all HEK-TRPM3 cells. These responses were not observed in nontransfected HEK cells (n = 166) or in the absence of extracellular Ca2+.

Solubility Information

Solubility	DMSO: 65 mg/mL (187.1 mM),Sonication is recommended. Ethanol: 17 mg/mL (48.93 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 5 mg/mL (14.39 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (14.39 mM),Suspension. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8784 mL	14.3922 mL	28.7844 mL
5 mM	0.5757 mL	2.8784 mL	5.7569 mL
10 mM	0.2878 mL	1.4392 mL	2.8784 mL
50 mM	0.0576 mL	0.2878 mL	0.5757 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

Vriens J , Owsianik G , Hofmann T , et al. TRPM3 is a nociceptor channel involved in the detection of noxious heat. [J]. Neuron, 2011, 70(3):482-494.