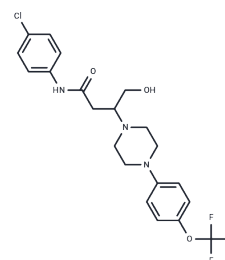


VBIT-4

Chemical Properties

CAS No. :	2086257-77-2
Formula:	C ₂₁ H ₂₃ ClF ₃ N ₃ O ₃
Molecular Weight:	457.87
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	VBIT-4 is a voltage-dependent anion channel 1 (VDAC1) oligomerization inhibitor (K _d : 17 μM). VBIT-4 can be used for therapeutic purposes in apoptosis-associated disorders (such as neurodegenerative and cardiovascular diseases).
Targets(IC ₅₀)	VDAC
In vitro	VBIT-4 targets the mitochondrial protein VDAC1, inhibits apoptosis and defends against mitochondrial dysfunction. VBIT-4 (0.1-10 μM) inhibits VDAC1 oligomerization, Cyto c release from mitochondria and apoptosis (in HEK-293 cells, IC ₅₀ s of 1.9±0.08 μM, 1.8±0.24 μM, and 2.9±0.12 μM, respectively). VBIT-4 offer a therapeutic strategy for treating different diseases associated with enhanced apoptosis and point to VDAC1 as a promising target for therapeutic intervention.
In vivo	METHODS: To test the effect on Alzheimer's disease, VBIT-4 (25 mg/kg) was injected intraperitoneally into APP/PS1 mice once daily for four weeks. RESULTS: VDAC1 was significantly up-regulated in APP/PS1 mice and decreased after VBIT-4 treatment; GPX4 expression was decreased in APP/PS1 mice and restored by VBIT-4 treatment; MWM test showed that APP/PS1 mice had a longer latency to find the plateau; VBIT-4 treatment significantly decreased the latency to find the plateau in APP/PS1 mice. VBIT-4 treatment significantly reduced the latency of platform finding in APP/PS1 mice. [3]

Solubility Information

Solubility	DMSO: 245 mg/mL (535.09 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	5% DMSO+40% PEG300+5% Tween 80+50% Saline: 2 mg/mL (4.37 mM) 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4.5 mg/mL (9.83 mM), Solution. <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	2.184 mL	10.9201 mL	21.8403 mL
5 mM	0.4368 mL	2.184 mL	4.3681 mL
10 mM	0.2184 mL	1.092 mL	2.184 mL
50 mM	0.0437 mL	0.2184 mL	0.4368 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

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