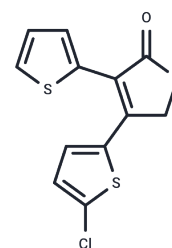


YC-001

Chemical Properties

CAS No. : 748778-73-6
 Formula: C₁₂H₇ClO₂S₂
 Molecular Weight: 282.77
 Storage: Store at low temperature
 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	YC-001 is an inverse agonist and antagonist targeting rod opsin. YC-001 binds reversibly to rod opsin, thereby stabilizing its structure and protecting mice from bright light-induced retinal degeneration, showing potential for research on retinal degenerative diseases.
Targets(IC50)	Endogenous Metabolite
In vitro	<p>Methods: In vitro assays were performed using gradient concentrations of YC-001 (0-100 μM).</p> <p>Results: The potency of YC-001 was 8.7 μM, with an efficacy range of 150-310%.</p> <p>Methods: Samples were treated with gradient concentrations of YC-001 (0.5, 1, 5, 10, 20, 40 μM).</p> <p>Results: YC-001 improved the glycosylation profile of the P23H rhodopsin mutant.</p> <p>Methods: Binding assays were conducted using gradient concentrations of YC-001 (0-1.5 μM).</p> <p>Results: YC-001 bound reversibly to rod opsin, with an EC₅₀ of 0.98 μM.</p> <p>Methods: NIH3T3 cells were treated with gradient concentrations of YC-001 (0.313, 0.625, 1.25, 2.5, 5, 10, 20, 80 μM).</p> <p>Results: YC-001 dose-dependently increased intracellular cAMP levels in NIH3T3 cells.</p>
In vivo	<p>Methods: Abca4^{-/-}Rdh8^{-/-} mice were intraperitoneally injected with YC-001 (50, 200 mg/kg).</p> <p>Results: YC-001 protected Abca4^{-/-}Rdh8^{-/-} mice against bright light-induced retinal degeneration.</p> <p>Methods: Mice were administered YC-001 systemically via intraperitoneal injection (200 mg/kg).</p> <p>Results: YC-001 could penetrate into mouse eyes after systemic administration but could not be retained for a long time.</p> <p>Methods: Mice were intraperitoneally injected with YC-001 (100 mg/kg, 200 mg/kg) once daily for 24 consecutive days.</p> <p>Results: YC-001 showed almost no acute toxicity[1].</p>

Solubility Information

A DRUG SCREENING EXPERT

Solubility	DMSO: 80 mg/mL (282.92 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5364 mL	17.6822 mL	35.3644 mL
5 mM	0.7073 mL	3.5364 mL	7.0729 mL
10 mM	0.3536 mL	1.7682 mL	3.5364 mL
50 mM	0.0707 mL	0.3536 mL	0.7073 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

Chen Y, et al. A novel small molecule chaperone of rod opsin and its potential therapy for retinal degeneration. Nat Commun. 2018 May 17;9(1):1976.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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