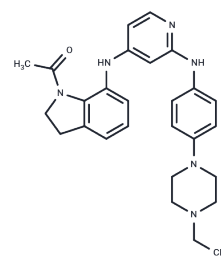


UCL-TRO-1938

Chemical Properties

CAS No. : 2919575-27-0
 Formula: C₂₇H₃₂N₆O
 Molecular Weight: 456.58
 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	UCL-TRO-1938 is a subtype-selective PI3K α allosteric activator with cardioprotective and neuroregenerative effects. UCL-TRO-1938 can induce cell proliferation and can be used to study diseases caused by abnormal PI3K α metabolism.
Targets(IC50)	Akt,PI3K
In vitro	In PI3K α -WT but not in PI3K α -KO MEFs, 24h treatment with UCL-TRO-1938 dose-dependently increased metabolic activity, with an EC ₅₀ of ~0.5 μ M, and a decrease in ATP levels in both PI3K α -WT and PI3K α -KO MEFs at concentrations >7.5 μ M, indicative of PI3K α -independent effects of UCL-TRO-1938 at these doses. [1]
In vivo	Male C57/BL6 mice weighing 25-30 g were used throughout. 10 mg/kg UCL-TRO-1938 compound in DMSO. UCL-TRO-1938 provided significant cardioprotection in an in vivo IRI model in mice, with a corresponding pAKTS473 increase in the hearts. [1]

Solubility Information

Solubility	DMSO: 25 mg/mL (54.75 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.38 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	2.1902 mL	10.951 mL	21.902 mL
5 mM	0.438 mL	2.1902 mL	4.3804 mL
10 mM	0.219 mL	1.0951 mL	2.1902 mL
50 mM	0.0438 mL	0.219 mL	0.438 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

Gong GQ, et al. A small-molecule PI3K α activator for cardioprotection and neuroregeneration. *Nature*. 2023 Jun; 618(7963):159-168.

Shi H, Pan B, Liang J, et al. miR-30c-5p inhibits esophageal squamous cell carcinoma progression by repressing the PI3K/AKT signaling pathway. *Thoracic Cancer*. 2024

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