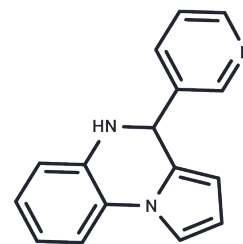


UBCS039

Chemical Properties

CAS No. : 358721-70-7
 Formula: C₁₆H₁₃N₃
 Molecular Weight: 247.29
 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	UBCS039 is the first synthetic Sirt6 activator(EC ₅₀ : 38 μM)
Targets(IC ₅₀)	Autophagy,Sirtuin
In vitro	UBCS039 induced a time-dependent activation of autophagy in several human tumor cell lines, as evaluated by increased content of the lipidated form of LC3B by western blot and of autophagosomal puncta by microscopy analysis of GFP-LC3. UBCS039-mediated activation of autophagy was strictly dependent on SIRT6 deacetylating activity since the catalytic mutant H133Y failed to activate autophagy. At the molecular level, SIRT6-mediated autophagy was triggered by an increase of ROS levels, which, in turn, resulted in the activation of the AMPK-ULK1-mTOR signaling pathway. Interestingly, antioxidants were able to completely counteract UBCS039-induced autophagy, suggesting that ROS burst had a key role in upstream events leading to autophagy commitment.

Solubility Information

Solubility	DMSO: 250 mg/mL (1010.96 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: 4 mg/mL (16.18 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	4.0438 mL	20.2192 mL	40.4384 mL
5 mM	0.8088 mL	4.0438 mL	8.0877 mL
10 mM	0.4044 mL	2.0219 mL	4.0438 mL
50 mM	0.0809 mL	0.4044 mL	0.8088 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

Pharmacological activation of SIRT6 triggers lethal autophagy in human cancer cells.[J]. Cell death & disease, 2018. Miao H, Wang Y, Su W, et al. Sirtuin 6 protects against podocyte injury by blocking the renin-angiotensin system by inhibiting the Wnt1/ β -catenin pathway. Acta Pharmacologica Sinica. 2023: 1-13.

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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