

AK-1

Chemical Properties

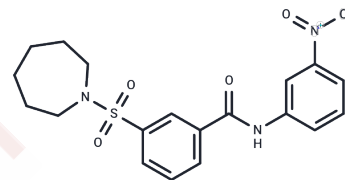
CAS No. : 330461-64-8

Formula: C₁₉H₂₁N₃O₅S

Molecular Weight: 403.45

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	AK-1 is a sirtuin 2 (SIRT2) inhibitor (IC ₅₀ :12.5 μM).that prevents hippocampal neurodegeneration in Alzheimer's disease models and induces cell cycle arrest in colon carcinoma cells.
Targets(IC ₅₀)	Sirtuin
In vitro	AK-1 induces the formation of α-synuclein aggregates in H4 neuroglioma cells expressing α-synuclein and synphilin-1.AK-1 (5 μM) decreases total cholesterol levels in Neuro2a and primary rat striatal neurons, as well as in hippocampal slice cultures[1].

Solubility Information

Solubility	DMSO: 40 mg/mL (99.14 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 2 mg/mL (4.96 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	2.4786 mL	12.3931 mL	24.7862 mL
5 mM	0.4957 mL	2.4786 mL	4.9572 mL
10 mM	0.2479 mL	1.2393 mL	2.4786 mL
50 mM	0.0496 mL	0.2479 mL	0.4957 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

Taylor D M , Balabadra U , Xiang Z , et al. A Brain-Permeable Small Molecule Reduces Neuronal Cholesterol by Inhibiting Activity of Sirtuin 2 Deacetylase[J]. ACS Chemical Biology, 2011, 6(6):540-546.

Outeiro T F , Kontopoulos E , Altmann S M , et al. Sirtuin 2 Inhibitors Rescue α -Synuclein-Mediated Toxicity in Models of Parkinson's Disease[J]. Science, 317.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481