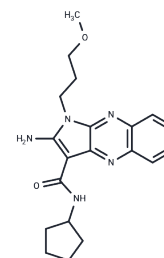


CAY10591

Chemical Properties

CAS No. : 839699-72-8
 Formula: C₂₀H₂₅N₅O₂
 Molecular Weight: 367.44
 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	Sirtuins (SIRT1) represent a distinct class of trichostatin A-insensitive lysyl-deacetylases (class III HDACs). Human SIRT1 is the homolog of yeast silent information regulator 2 (Sir2) and has been shown to regulate the activity of the p53 tumor suppressor and inhibit apoptosis. Small molecule activators of SIRT1, such as resveratrol, extend lifespan in yeast and <i>C. elegans</i> in a manner that resembles caloric restriction. CAY10591 has been identified as an activator of the enzyme SIRT1. This compound increases fluorescence by 233% in a SIRT1 activity assay. [Activator activity was defined as the percentage of signal increase relative to signal window in the following formula: $100 \times (\text{Sample} - \text{Signal}_{\text{low}}) / (\text{Signal}_{\text{high}} - \text{Signal}_{\text{low}})$]. CAY10591 suppresses TNF- α in a dose-dependent manner. In THP-1 cells, TNF- α levels decreased from 325 pg/ml (control) to 104 and 53 pg/ml with 20 and 60 μM CAY10591, respectively. This activator also has a significant dose-dependent effect on fat mobilization in differentiated adipocytes, which would indicate the potential of SIRT1 activators for anti-obesity or anti-diabetic purposes.
Targets(IC50)	Others,Sirtuin

Solubility Information

Solubility	DMSO: 20 mg/mL (54.43 mM),Sonication is recommended. DMF:PBS (pH 7.2) (1:1): 0.5 mg/mL (1.36 mM),Sonication is recommended. DMF: 30 mg/mL (81.65 mM),Sonication is recommended. Ethanol: 1 mg/mL (2.72 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	2.7215 mL	13.6077 mL	27.2153 mL
5 mM	0.5443 mL	2.7215 mL	5.4431 mL
10 mM	0.2722 mL	1.3608 mL	2.7215 mL
50 mM	0.0544 mL	0.2722 mL	0.5443 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.

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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