

E1231

Chemical Properties

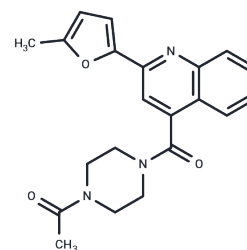
CAS No. : 1031195-19-3

Formula: C₂₁H₂₁N₃O₃

Molecular Weight: 363.41

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	E1231 is an activator of SIRT1 . E1231 protects from experimental atherosclerosis and lowers plasma cholesterol and triglycerides by enhancing ABCA1 expression.
Targets(IC50)	Sirtuin
In vitro	E1231, a piperazine 1,4-diamide compound, was identified as a SIRT1 activator with EC50value of 0.83 μM. E1231 interacted with recombinant human SIRT1 protein and deacetylated liver X receptor-alpha (LXRα). E1231 increased ATP-binding cassette transporter A1 (ABCA1) expression in RAW 264.7 cells dependent on SIRT1 and LXRα. E1231 promoted cholesterol efflux and inhibited lipid accumulation in RAW 264.7 cells via SIRT1 and ABCA1. In the golden hamster hyperlipidemia model, E1231 treatment decreased total cholesterol and triglyceride levels in both serum and the liver, while increased cholesterol content in feces. Moreover, E1231 increased ABCA1 and SIRT1 protein expression in the liver. In ApoE-/-mice, E1231 treatment reduced atherosclerotic plaque development compared with untreated ApoE-/-mice.
Cell Research	A high-throughput screening assay was established to identify SIRT1 activators. Surface plasmon resonance and immunoprecipitation were performed to confirm the interaction of E1231 with SIRT1. Cholesterol assay was performed to demonstrate the in vitro effect of E1231. The in vivo effect of E1231 was evaluated in experimental models

Solubility Information

Solubility	DMSO: 60 mg/mL (165.1 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 (5.5 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	2.7517 mL	13.7586 mL	27.5171 mL
5 mM	0.5503 mL	2.7517 mL	5.5034 mL
10 mM	0.2752 mL	1.3759 mL	2.7517 mL
50 mM	0.055 mL	0.2752 mL	0.5503 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

Feng T , Liu P , Wang X , et al. SIRT1 activator E1231 protects from experimental atherosclerosis and lowers plasma cholesterol and triglycerides by enhancing ABCA1 expression[J]. Atherosclerosis, 2018:172-181.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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