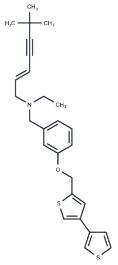
Data Sheet (Cat.No.TQ0115)

TargetMol

NB-598

Chemical Properties



CAS No. : 131060-14-5

Formula: C27H31NOS2

Molecular Weight: 449.67

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	NB-598 is an effective and competitive inhibitor of squalene epoxidase. It suppresses triglyceride biosynthesis through the farnesol pathway.
Targets(IC50)	Others,Antifungal,COX
In vitro	NB-598 (10 μM) inhibits the synthesis of sterol and sterol ester from [14C]acetate without affecting the synthesis of other lipids such as phospholipids (PL), free fatty acids (FFA) and triacylglycerol (TG). In the absence of exogenous liposomal cholesterol, NB-598 reduces ACAT activity by 31%. NB-598 reduces ACAT activity by 22% even in the presence of a 600 pM concentration of liposomal cholesterol [1]. NB598 (10 μM) causes a 36±7% reduction in the total cholesterol level of MIN6 cells. NB598 causes a significant decrease in cholesterol by 49±2%, 46±7%, and 48±2% from PM, ER, and SG, respectively. NB598 dose-dependently inhibits insulin secretion under both basal (1 mM glucose) and glucose-stimulated (16.7 mM glucose) conditions. NB598 at concentrations up to 10 μM does not affect peak outward KV currents or the voltage dependence of activation but increases current inactivation [2].
Kinase Assay	Caco-2 cells are grown in a 58 cm2 plastic dish with medium A for 13 days. The cells are washed with medium B, and then cultured with medium B including cholesterol-micelle and each compound. The compound is dissolved in Me2SO, and the final concentration of Me2SO is 0.1%(v/v). After 18 hr of incubation, the cells are washed extensively with phosphate-buffered saline (PBS) to remove the compound. Microsomes are prepared as described above. The reaction mixture (0.2 mL) consisted of 0.1 mg microsomes, 0.25% BSA and 40 PM [14C]oleoyl CoA in buffer A. To avoid the effects of endogenous cholesterol, liposome (2 mol of cholesterol: 1 mol of phosphatidylcholine) [15] is added to the reaction mixture. The microsomes are preincubated for 1 hr with or without exogenous cholesterol, and ACAT activity is determined as described above [1].

Solubility Information

Solubility	DMSO: 140 mg/mL (311.34 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: 10 mg/mL (22.24 mM),Solution. 10% DMSO+90% Corn Oil: 1 mg/mL (2.22 mM),Sonication is recommended. 10% DMSO+90% Saline: < 10 mg/mL (22.24 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2239 mL	11.1193 mL	22.2385 mL
5 mM	0.4448 mL	2.2239 mL	4.4477 mL
10 mM	0.2224 mL	1.1119 mL	2.2239 mL
50 mM	0.0445 mL	0.2224 mL	0.4448 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

Horie M, et al. Effects of NB-598, a potent squalene epoxidase inhibitor, on the apical membrane uptake of cholesterol and basolateral membrane secretion of lipids in Caco-2 cells. Biochem Pharmacol. 1993 Jul 20;46(2): 297-305.

Xia F, et al. Inhibition of cholesterol biosynthesis impairs insulin secretion and voltage-gated calcium channel function in pancreatic beta-cells. Endocrinology. 2008 Oct;149(10):5136-45.