NB-598

Cat. No.: HY-16343
CAS No.: 131060-14-5
Molecular Formula: C₂₇H₃₁NOS₂
Molecular Weight: 449.67
Target: Others
Pathway: Others
Storage: Please store the product under the recommended conditions in the COA.

BIOLOGICAL ACTIVITY

Description
NB-598 is a potent and competitive inhibitor of squalene epoxidase (SE), and suppresses triglyceride biosynthesis through the farnesol pathway.

IC₅₀ & Target
squalene epoxidase

In Vitro
NB598 (10 μM) causes a 36±7% reduction in 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[1]. 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[2]. NB-598 suppresses the secretion of cholesterol and triacylglycerol from HepG2 cells into the medium[3].

PROTOCOL

Kinase Assay[2]
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.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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REFERENCES

