**BIOLOGICAL ACTIVITY:**

NB–598 (Maleate) is a potent and competitive inhibitor of squalene epoxidase (SE), and suppresses triglyceride biosynthesis through the farnesol pathway. 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 (Extracted from published papers and Only for reference)**

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.

**References:**

Caution: Product has not been fully validated for medical applications. For research use only.
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