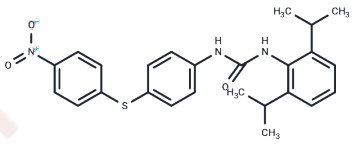
Data Sheet (Cat.No.T23521)

TargetMol

VULM 1457

Chemical Properties



CAS No. : 228544-65-8

Formula: C25H27N3O3S

Molecular Weight: 449.57

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	VULM 1457 is a potent ACAT inhibitor. VULM 1457 has remarkable hypolipidaemic activity and improves the overall myocardial ischaemia-reperfusion injury outcomes. VULM1457 significantly reduces production and secretion of adrenomedullin (AM) and down-regulates AM receptors on human hepatoblastic cells.
Targets(IC50)	Acyltransferase
In vitro	Preincubation of HepG2 cells with VULM1457 (0.1 μM) significantly reduced the specific [125I]AM binding on hypoxic cells with BmaxHypox being 127±10 and KD 0.06±0.11 nM. Preincubation of cells with VULM1457 (0.1 μM) significantly enhanced the number of cells (24.2±6 %) and higher concentrations of VULM1457 (1.0 and 10.0 μM) reduces the total number of cells[2]. In HepG2 cell lines, VULM1457 (0.03 μM; 0.1 μM) significantly down-regulated specific AM receptors on HepG2 cells, and reduced AM secretion of HepG2 cells exposed to hypoxia. VULM1457 negatively regulates cell proliferation induced by AM[2].
In vivo	In male Wistar rats, VULM 1457 protected the hearts of diabetic-hypercholesterolaemic rats against ischemia/reperfusion injury in vivo[1]. VULM 1457 (50 mg/kg/day) significantly decreases plasma total cholesterol levels (1.7±0.1 mM vs. 2.9±0.5 mM in diabetic-hypercholesterolaemic animals). The hypolipidaemic effect of VULM 1457 is also observed in the liver of DM-HCH rats (3.9±0.2 mg/g vs. 7.4±1.0 mg/g)[1].

Solubility Information

Solubility	DMSO: 60 mg/mL (133.46 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2243 mL	11.1217 mL	22.2435 mL
5 mM	0.4449 mL	2.2243 mL	4.4487 mL
10 mM	0.2224 mL	1.1122 mL	2.2243 mL
50 mM	0.0445 mL	0.2224 mL	0.4449 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

Adameová A, et al. The myocardial infarct size-limiting and antiarrhythmic effects of acyl-CoA:cholesterol acyltransferase inhibitor VULM 1457 protect the hearts of diabetic-hypercholesterolaemic rats against ischaemia/reperfusion injury both in vitro and in vivo. Eur J Pharmacol. 2007;576(1-3):114-121.

J Drímal, et al. The ACAT inhibitor VULM1457 significantly reduced production and secretion of adrenomedullin (AM) and down-regulated AM receptors on human hepatoblastic cells. Gen Physiol Biophys. 2005 Dec;24(4):397-409.

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