Product Data Sheet

Product Name: YM-53601 free base
Cat. No.: GC31516

Chemical Properties

Cas. No.	182959-28-0		
SMILES	F/C(COC1=CC(NC2=C3C=CC=C2)=C3C=C1)=C4CN5CCC/4CC5		
Formula	$C_{21}H_{21}FN_2O$	M.Wt	336.4
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	YM-53601 free base		

Protocol

Animal experiment:	Rats[1]Rats are given a single oral administration of YM-53601 at the concentration of 50 mg/kg, followed 1 h later by intraperitoneal injection of [14C] acetate (40.5 µCi per animal). The rats and the hamsters are anaesthetized with diethyl ether and killed 1 h after the [14C]-acetate injection. Cholesterol biosynthesis is assayed[1].

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References:

[1]. Ugawa T, et al. YM-53601, a novel squalene synthase inhibitor, suppresses lipogenic biosynthesis and lipid secretion in rodents. Br J Pharmacol. 2003 May;139(1):140-6.

Background

YM-53601 is a squalene synthase inhibitor (IC_{50}s = 79 and 90 nM in HepG2 cells and rat liver microsomes, respectively).[1] It inhibits cholesterol biosynthesis in rats (ED_{50} = 32 mg/kg).[1] YM-53601 dose-dependently reduces plasma triglyceride and non-HDL cholesterol levels in hamsters fed both normal and high-fat diets. It also reduces viral RNA, core and NS3 protein production, and secreted viral particles in Huh7.5.1-8 cells infected with the hepatitis C virus (HCV) strain JFH-1 without affecting cell viability at concentrations ranging from 0.5 to 1.5 μM.[2] YM-53601 (1-10 μM) confers protection against cytotoxicity induced by the bacterial pore-forming toxin pneumolysin in HBE1 and normal human bronchial epithelial (NHBE) cells.[3]

1.Ugawa, T., Kakuta, H., Moritani, H., et al.YM-53601, a novel squalene synthase inhibitor, reduces plasma cholesterol and triglyceride levels in several animal speciesBr. J. Pharmacol.13163-70(2000) 2.Saito, K., Shirasago, Y., Suzuki, T., et al.Targeting cellular squalene synthase, an enzyme essential for cholesterol biosynthesis, is a potential antiviral strategy against hepatitis C virusJ. Virol.89(4)2220-2232(2015) 3.Statt, S., Ruan, J.W., Hung, L.Y., et al.Statin-conferred enhanced cellular resistance against bacterial pore-forming toxins in airway epithelial cellsAm. J. Respir. Cell Mol. Biol.53(5)689-702(2015)

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