



Incubation Time:	24 hours
Result:	Reduced the mitochondrial cholesterol levels in both H35 and HepG2 cells.

#### In Vivo

YM-53601 suppresses cholesterol biosynthesis in rats (ED<sub>50</sub>, 32 mg/kg)<sup>[1]</sup>.  
 YM-53601 also reduces plasma non-HDL cholesterol levels in hamsters by approximately 70% at an oral dose of 50 mg/kg/day for 5 days<sup>[2]</sup>.  
 YM-53601 potentiates Doxorubicin-mediated hepatocellular carcinoma cells (HCC) growth arrest and cell death in vivo<sup>[4]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Sprague-Dawley (SD) rats weighing 150-170 g <sup>[1]</sup>
Dosage:	6.25, 12.5, 25 or 50 mg/kg
Administration:	Given a single p.o.
Result:	Inhibited cholesterol biosynthesis from acetate in a dose-dependent manner in rats. The ED <sub>50</sub> value for YM-53601 cholesterol biosynthesis inhibition is 32 mg/kg.

Animal Model:	Five- to six-week-old male BALB/c athymic (nu/nu) nude mice <sup>[4]</sup>
Dosage:	15 mg/kg
Administration:	2 wk of daily treatment by p.o. gavage
Result:	Significantly decreased the intratumor cholesterol levels.

## CUSTOMER VALIDATION

- Research Square Preprint. 2023 Jun 22.

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## REFERENCES

- [1]. T Ugawa, et al. YM-53601, a novel squalene synthase inhibitor, reduces plasma cholesterol and triglyceride levels in several animal species. *Br J Pharmacol.* 2000 Sep;131(1):63-70.
- [2]. Tsukasa Ishihara, et al. Syntheses of 3-ethylidenequinclidine derivatives as squalene synthase inhibitors. Part 2: enzyme inhibition and effects on plasma lipid levels. *Bioorg Med Chem.* 2003 Aug 15;11(17):3735-45.
- [3]. Eun-Mee Park, et al. Farnesyl-diphosphate farnesyltransferase 1 regulates hepatitis C virus propagation. *FEBS Lett.* 2014 May 2;588(9):1813-20.
- [4]. Joan Montero, et al. Mitochondrial cholesterol contributes to chemotherapy resistance in hepatocellular carcinoma. *Cancer Res.* 2008 Jul 1;68(13):5246-56.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA