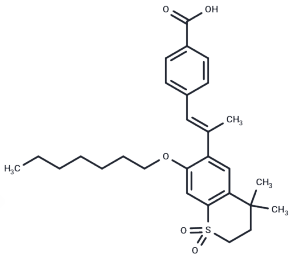
Data Sheet (Cat.No.T28589)

TargetMol

Ro 41-5253

Chemical Properties



CAS No. : 144092-31-9

Formula: C28H36O5S

Molecular Weight: 484.65

Storage: Keep away from direct sunlight,Keep away from moisture
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	Ro 41-5253 is an orally active RARα antagonist, ligand, and partial agonist of peroxisome proliferator-activated receptor (PPAR)-γ. It exhibits antitumor activity, inhibits proliferation, and induces apoptosis in MCF-7 and ZR-75.1 estrogen receptor-positive breast cancer cells.
Targets(IC50)	Apoptosis,Retinoid Receptor
In vitro	In human breast cancer cell lines MCF-7 and ZR 75.1, Ro 41-5253 (1 nM-10 μM; for 10 days) inhibited cell growth. At a concentration of 10 μM, the inhibition rate of MCF-7 cell growth was 81%, 30% at 1 μM, and no significant inhibition was observed at concentrations below 0.1 μM. For ZR 75.1 cells, the growth inhibition rate was 74% at 10 μM, 63% at 1 μM, and 42% at 0.1 μM[1].
In vivo	In six-week-old athymic female Balb/c mice implanted with MCF-7 cell line, Ro 41-5253 (10, 30, 100, 300, and 600 mg/kg; oral gavage; once weekly; for 4 weeks) resulted in a reduction in tumor volume at doses of 10, 30, and 100 mg/kg, with no toxic side effects [2].

Solubility Information

Solubility	DMSO: 80 mg/mL (165.07 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (6.81 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0633 mL	10.3167 mL	20.6334 mL
5 mM	0.4127 mL	2.0633 mL	4.1267 mL
10 mM	0.2063 mL	1.0317 mL	2.0633 mL
50 mM	0.0413 mL	0.2063 mL	0.4127 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

S Toma, et al. RARalpha antagonist Ro 41-5253 inhibits proliferation and induces apoptosis in breast-cancer cell lines. Int J Cancer. 1998 Sep 25;78(1):86-94.
Salvatore Toma, et al. Retinoids and human breast cancer: in vivo effects of an antagonist for RAR-alpha. Cancer Lett. 2005 Feb 28;219(1):27-31.
C Apfel, et al. A retinoic acid receptor alpha antagonist selectively counteracts retinoic acid effects. Proc Natl Acad Sci U S A. 1992 Aug 1;89(15):7129-33.

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