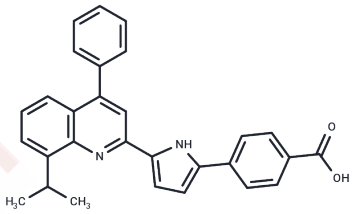
Data Sheet (Cat.No.T22767)

TargetMol

ER 50891

Chemical Properties



CAS No. : 187400-85-7

Formula: C29H24N2O2

Molecular Weight: 432.51

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	ER-50891 is a potent retinoic acid receptor alpha (RARα) antagonist. er-50891 reduces the inhibitory effect of allosteric retinoic acid and restores osteoblast differentiation induced by bone morphogenetic protein 2.
Targets(IC50)	Retinoid Receptor
In vitro	ER-50891 significantly antagonized the inhibition of ATRA and enhanced the total cell metabolic activity and proliferation of preosteoblasts. Dose-dependent assays show ER-50891 could also rescue ATRA inhibited OCN expression and mineralization with or without the induction of BMP. ER-50891 also suppressed the ALP activity that was synergistically enhanced by BMP and ATRA. Neither ATRA, nor ER-50891 or their combination significantly affected the level of BMP-induced phosphorylated Smad1/5. The antagonist of RARα, ER-50891 could significantly attenuate ATRA's inhibitive effects on BMP 2-induced osteoblastogenesis.[3]

Solubility Information

Solubility	DMSO: 10 mg/mL (23.12 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3121 mL	11.5604 mL	23.1209 mL
5 mM	0.4624 mL	2.3121 mL	4.6242 mL
10 mM	0.2312 mL	1.156 mL	2.3121 mL
50 mM	0.0462 mL	0.2312 mL	0.4624 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

Batran RZ, et al. New quinolone derivatives as neuropeptide S receptor antagonists: Design, synthesis, homology modeling, dynamic simulations and modulation of Gq/Gs signaling pathways. Bioorg Chem. 2021;111:104817.
Kyzer JL, et al. Investigation of selective retinoic acid receptor alpha antagonist ER-50891 and related analogs for male contraception [published online ahead of print, 2023 May 8]. Arch Pharm (Weinheim). 2023;e2300031.
Wang S, et al. The Antagonist of Retinoic Acid Receptor α, ER-50891 Antagonizes the Inhibitive Effect of All-Trans Retinoic Acid and Rescues Bone Morphogenetic Protein 2-Induced Osteoblastogenic Differentiation. Drug Des Devel Ther. 2020;14:297-308.
Sun W, et al. All-trans retinoic acid and human salivary histatin-1 promote the spreading and osteogenic activities of pre-osteoblasts in vitro. FEBS Open Bio. 2020;10(3):396-406.