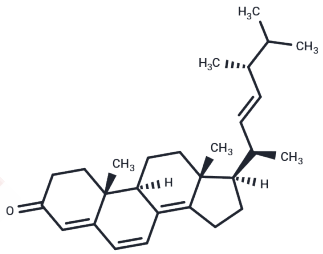
Data Sheet (Cat.No.TN1617)

TargetMol

Ergosta-4,6,8(14),22-tetraen-3-one

Chemical Properties



CAS No. : 19254-69-4

Formula: C28H40O

Molecular Weight: 392.62

Storage: Keep away from moisture,Keep away from direct sunlight
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	Ergosta-4,6,8(14),22-tetraen-3-one is a natural ergosterol derivative suitable for biochemical experiments and drug synthesis research.
Targets(IC50)	Others
In vitro	Ergosta-4,6,8(14),22-tetraen-3-one (0, 5, 10, 15, and 20 μg/ml, for 6, 12, and 24 hours) exhibited significant cytotoxicity against HepG2 cells, with IC50 values decreasing as treatment duration and concentration increased, reaching 15.6, 11.8, and 10.0 μg/ml, respectively [1]. Treatment with Ergosta-4,6,8(14),22-tetraen-3-one (0, 5, 10, and 20 μg/ml, for 12 hours) induced cell cycle arrest at the G2/M phase in HepG2 cells, with the proportion of G2/M phase cells peaking at 12 hours [1]. Treatment with Ergosta-4,6,8(14),22-tetraen-3-one (0, 5, 10, and 20 μg/ml, for 12 hours) significantly increased apoptosis in HepG2 cells, with the proportions of early and late apoptotic cells rising in correlation with the concentration of Ergosta-4,6,8(14),22-tetraen-3-one [1]. Treatment with Ergosta-4,6,8(14),22-tetraen-3-one (0, 5, 10, and 20 μg/ml, for 12 hours) led to the activation of caspase-3, -8, and -9, increased cleavage of PARP, upregulation of Bax protein expression, downregulation of Bcl-2 protein expression, and an elevated Bax/Bcl-2 ratio, indicating that ergone induces apoptosis in HepG2 cells through both intrinsic and extrinsic apoptotic pathways [1].
In vivo	Ergosta-4,6,8(14),22-tetraen-3-one (10, 20 mg/kg, gavage, for 8 weeks) exhibited certain preventive effects on aristolochic acid I (AAI)-induced early kidney injury in rats. This compound significantly reduced serum creatinine, blood urea nitrogen, urinary protein, and urinary NAG levels, while also alleviating pathological damage in renal tissues [2].

Solubility Information

Solubility	DMSO: 16 mg/mL (40.75 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.547 mL	12.735 mL	25.4699 mL
5 mM	0.5094 mL	2.547 mL	5.094 mL
10 mM	0.2547 mL	1.2735 mL	2.547 mL
50 mM	0.0509 mL	0.2547 mL	0.5094 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

Ergosta-4,6,8(14),22-tetraen-3-one induces G2/M cell cycle arrest and apoptosis in human hepatocellular carcinoma HepG2 cells.Biochim Biophys Acta. 2011 Apr;1810(4):384-90.
Zhao YY, ET AL. Ergosta-4,6,8(14),22-tetraen-3-one isolated from Polyporus umbellatus prevents early renal injury in aristolochic acid-induced nephropathy rats. J Pharm Pharmacol. 2011 Dec;63(12):1581-6.