Mestranol

Cat. No.: HY-B0390

CAS No.: 72-33-3

Molecular Formula: $C_{21}H_{26}O_2$

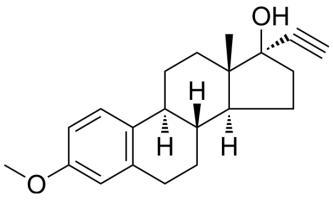
Molecular Weight: 310.43

Target: Estrogen Receptor/ERR

Pathway: Vitamin D Related/Nuclear Receptor

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (107.37 mM; Need ultrasonic)

H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2213 mL	16.1067 mL	32.2134 mL
	5 mM	0.6443 mL	3.2213 mL	6.4427 mL
	10 mM	0.3221 mL	1.6107 mL	3.2213 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.70 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.70 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Mestranol is an inactive proagent and becomes biologically active on conversion to ethinyl estradiol (EE). Mestranol acts as an estrogen receptor agonist. Mestranol combines with a progestin in vivo and can be used for the research of menopausal hormone or menstrual disorders. Mestranol is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.

In Vitro

Mestranol is a low potency synthetic estrogen that has been shown to be much more stable than 17β-Estradiol(HY-B0141) in hepatoma cell culture[3].

Mestranol (10 μM; 6 days) stimulates the growth of ERpositive MCF-7 WS8 cells up to 250% of control levels, growth stimulation could be partially reversed by tamoxifen[3].

However, in Hep G2 hepatoma cells, Mestranol (10 μM; 6 days) inhibits the growth of Hep 3B cells by 40% compared to control cells. Mestranol alone or cotreatment with tamoxifen both can inhibit cell growth. And cotreatment exhibits an additive effect with tamoxifen on growth inhibition[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. H Kappus, et al. Affinity of ethynyl-estradiol and mestranol for the uterine estrogen receptor and for the microsomal mixed function oxidase of the liver. J Steroid Biochem. 1973 Mar;4(2):121-8.

[2]. J W Goldzieher, et al. Pharmacokinetics of ethinyl estradiol and mestranol. Am J Obstet Gynecol. 1990 Dec;163(6 Pt 2):2114-9.

[3]. S Y Jiang, et al. Tamoxifen inhibits hepatoma cell growth through an estrogen receptor independent mechanism. J Hepatol. 1995 Dec;23(6):712-9.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

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