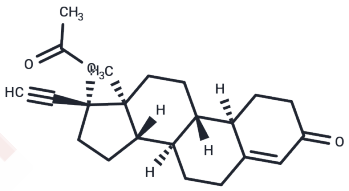
Data Sheet (Cat.No.T40598)

TargetMol

Norethindrone acetate

Chemical Properties



CAS No. : 51-98-9

Formula: C22H28O3

Molecular Weight: 340.46

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	Norethindrone acetate (19-Norethindroneacetate) is an oestrogen with inhibitory effects on adolescent menstruation and hepatic adenomas and is often used in combination with progestins in the study of endometriosis.
Targets(IC50)	Estrogen Receptor/ERR,Progesterone Receptor
In vivo	Norethindrone acetate effectively relieves dysmenorrhea and noncyclic pelvic pain.[1] Norethindrone acetate as a standalone treatment option demonstrates excellent tolerability and efficacy in managing pain and bleeding associated with all stages of endometriosis.[2] Experimental studies indicate that norethindrone acetate exhibits low acute toxicity in animals. Administration of norethindrone acetate alone to rodents at doses several times higher than those used in humans does not result in treatment-related mortality, hematological changes, behavioral alterations, or organ pathology.[3] Administration of norethindrone acetate leads to significant and proportional reductions in the concentrations of triglycerides, cholesterol, and phospholipids in plasma lipoproteins with a density <1.006 in rats fed a high carbohydrate diet.[4] Norethindrone acetate (0.1 mM) also significantly inhibits the incorporation of both palmitate and glycerol into triglycerides in isolated hepatocytes obtained from fed rats.[4]

Solubility Information

Solubility	H2O: 0.6 mg/mL (1.76 mM),Sonication is recommended. DMSO: 200 mg/mL (587.44 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: 10 mg/mL (29.37 mM),Solution. 10% DMSO+90% Saline: < 10 mg/mL (29.37 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. *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	2.9372 mL	14.686 mL	29.372 mL
5 mM	0.5874 mL	2.9372 mL	5.8744 mL
10 mM	0.2937 mL	1.4686 mL	2.9372 mL
50 mM	0.0587 mL	0.2937 mL	0.5874 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

Muneyyirci-Delale O, et al. Effect of norethindrone acetate in the treatment of symptomatic endometriosis. Int J Fertil Womens Med. 1998 ; 43(1):24-27.
Kaser DJ, et al. Use of norethindrone acetate alone for postoperative suppression of endometriosis symptoms. J Pediatr Adolesc Gynecol. 2012 ; 25(2):105-108.
Maier WE, et al. Pharmacology and toxicology of ethinyl estradiol and norethindrone acetate in experimental animals. Regul Toxicol Pharmacol. 2001 ; 34(1):53-61.
Cheng DC, et al. Norethindrone acetate inhibition of triglyceride synthesis and release by rat hepatocytes. Atherosclerosis. 1983 ; 46(1):41-48.