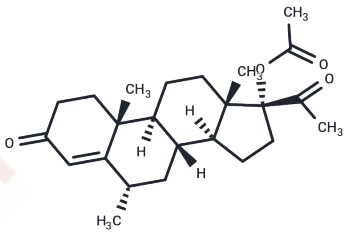
Data Sheet (Cat.No.T1261)

TargetMol

Medroxyprogesterone Acetate

Chemical Properties



CAS No. : 71-58-9

Formula: C24H34O4

Molecular Weight: 386.52

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Medroxyprogesterone Acetate (Farlutin) is a synthetic progestin that is derived from 17-hydroxyprogesterone. It is a long-acting contraceptive that is effective both orally or by intramuscular injection and has also been used to treat breast and endometrial neoplasms.
Targets(IC50)	Glucocorticoid Receptor,Estrogen/progestogen Receptor,Androgen Receptor, Endogenous Metabolite,Progesterone Receptor
In vitro	Medroxyprogesterone acetate (MPA) and progesterone significantly reduced the levels of glutamic acid decarboxylase (GAD) in the hippocampus, while markedly increasing GAD levels in the olfactory cortex. In aged ovariectomized rats, MPA impaired the retention of delayed memory in the swim arm task and exacerbated overnight forgetting in the Morris water maze.
In vivo	Medroxyprogesterone acetate (MPA) reduces the secretion of IL-6 and PTHrP in human breast cancer cells and downregulates their expression in KTC-2 cells in a dose-dependent manner. In M-1 cells, MPA and dexamethasone increase the promoter-driven luciferase activity of α-ENaC in a dose-dependent fashion, an effect which is not inhibited by Org31710, indicating that MPA's regulation of α-ENaC is independent of the progesterone receptor (PR). Similarly, MPA and dexamethasone upregulate the mRNA of α-ENaC and SGK1 in both M-1 and Madin-Darby canine kidney-C7 cells, whereas progesterone does not exhibit this effect. At 0.1 nM, MPA significantly enhances the in vitro production of specific immunoglobulin G antibodies, an effect that seems to involve the interaction between progesterone and the PRG receptor. MPA also inhibits the enzyme 3-hydroxysteroid dehydrogenase, which is involved in the reversible conversion between THP and DHP, thereby potentially affecting the action of DHP and THP in the brain.

Solubility Information

Solubility	DMSO: 9 mg/mL (23.28 mM),Sonication is recommended. Ethanol: 10 mg/mL (25.87 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5872 mL	12.9359 mL	25.8719 mL
5 mM	0.5174 mL	2.5872 mL	5.1744 mL
10 mM	0.2587 mL	1.2936 mL	2.5872 mL
50 mM	0.0517 mL	0.2587 mL	0.5174 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.

Reference

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