

5 α -Pregnane-3,20-dione

Chemical Properties

CAS No. : 566-65-4

Formula: C₂₁H₃₂O₂

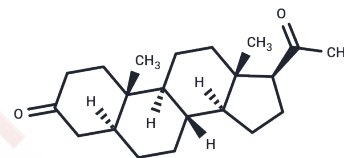
Molecular Weight: 316.48

Storage:

Keep away from direct sunlight, Keep away from moisture, Store under nitrogen

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	5 α -Pregnane-3,20-dione is a biologically active 5- α -reduced metabolite of plasma progesterone.
Targets(IC ₅₀)	Endogenous Metabolite
In vitro	the endogenous progesterone metabolite, 5 α -Pregnane-3,20-dione, may be involved in promoting breast neoplasia and metastasis by affecting adhesion and cytoskeletal molecules.
Cell Research	MCF-7 cells were grown without or with 5 α -Pregnane-3,20-dione (10 ⁻⁹ -10 ⁻⁵ M), and the effects on cell and nuclear morphology, adhesion plaques, vinculin and actin expression, actin polymerization, and microfilament distribution were examined by immunohistochemistry, morphometry (using confocal microscopy and digital computer imaging analysis), and Western blotting. Treatment of cells with 10 ⁻⁹ -10 ⁻⁶ M 5 α -Pregnane-3,20-dione resulted in dose-dependent decreases in cell area, cell-to-cell contacts, and attachment to the substratum, and increases in variation in nuclear area. These changes in the 5 α P-treated cells were accompanied by decreases in vinculin-containing adhesion plaques, vinculin expression, polymerized actin stress fibers, and decreases in insoluble and increases in soluble actin fractions.

Solubility Information

Solubility	DMSO: 1.24 mg/mL (3.92 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1598 mL	15.7988 mL	31.5976 mL
5 mM	0.632 mL	3.1598 mL	6.3195 mL
10 mM	0.316 mL	1.5799 mL	3.1598 mL
50 mM	0.0632 mL	0.316 mL	0.632 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

Wiebe J P , Muzia D . The endogenous progesterone metabolite, 5a-pregnane-3,20-dione, decreases cell-substrate attachment, adhesion plaques, vinculin expression, and polymerized F-actin in MCF-7 breast cancer cells.[J]. Endocrine, 2001, 16(1):7-14.

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