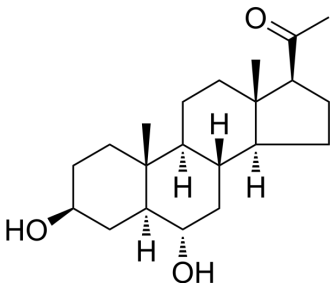
5α-Pregnane-3β,6α-diol-20-one

Cat. No.:	HY-109564
CAS No.:	21853-11-2
Molecular Formula:	$C_{21}H_{34}O_3$
Molecular Weight:	334.49
Target:	Drug Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (298.96 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9896 mL	14.9481 mL	29.8963 mL
	5 mM	0.5979 mL	2.9896 mL	5.9793 mL
	10 mM	0.2990 mL	1.4948 mL	2.9896 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (7.47 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.47 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.47 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

5α-Pregnane-3β,6α-diol-20-one is a mitogenic metabolite of progesterone, and it can be produced in starved androgen-responsive prostate cancer cells.

In Vitro

Progesterone is converted to 5α-pregnane-3β,6α-diol-20-one in human fibroblasts[1]. Pregnenolone and progesterone are avidly metabolized to 5α-pregnan-3β,6α-diol-20-one in the C4.2 cell line, with nearly complete conversions at 24 h and 18 h, respectively. Preferential 5α-pregnan-3β,6α-diol-20-one formation from early steroid precursors is independent of CYP17A1 but rather relies on 3β-HSD activity[2].

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

REFERENCES

[1]. Zhang J, et al. Progesterone metabolism in human fibroblasts is independent of P-glycoprotein levels and Niemann-Pick type C disease. J Steroid Biochem Mol Biol. 1999 Sep-Oct;70(4-6):123-31.

[2]. de Mello Martins AGG, et al. CYP17A1-independent production of the neurosteroid-derived 5α-pregnan-3β,6α-diol-20-one in androgen-responsive prostate cancer cell lines under serum starvation and inhibition by Abiraterone. J Steroid Biochem Mol Biol. 2017 Nov;174:183-191.

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