

# Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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# Lieferung & Zahlungsart

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- Gefahrgutzuschlag
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# **PRODUCT INFORMATION**



# 5β-Dihydroprogesterone

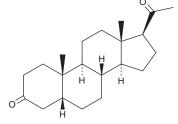
Item No. 34644

CAS Registry No.: 128-23-4

Formal Name: (5β)-pregnane-3,20-dione

Synonyms: 5β-DHP, NSC 82868, 5β-Pregnanedione

MF:  $C_{21}H_{32}O_{2}$ FW: 316.5 **Purity:** ≥95% Supplied as: A solid Storage: -20°C Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

#### **Laboratory Procedures**

5β-Dihydroprogesterone (5β-DHP) is supplied as a solid. A stock solution may be made by dissolving the 5 $\beta$ -DHP in the solvent of choice, which should be purged with an inert gas. 5 $\beta$ -DHP is soluble in the organic solvent chloroform at a concentration of approximately 30 mg/ml.

### Description

5β-DHP is a progesterone receptor agonist and metabolite of progesterone (Item No. 15876).<sup>1,2</sup> It is formed from progesterone by  $5\beta$ -reductase.<sup>2</sup>  $5\beta$ -DHP inhibits spontaneous contractions in isolated rat uterus when used at a concentration of 10 µg/ml, an effect that can be blocked by the progesterone receptor antagonist RU486 (mifepristone; Item No. 10006317) but not the GABA<sub>A</sub> receptor antagonist picrotoxin (Item No. 20771). It is a negative modulator of homooligomeric  $\rho 1$  subunit-containing GABA<sub>A</sub> receptors, inhibiting GABA-induced currents in X. laevis oocytes expressing these receptors ( $IC_{50} = 5.02 \mu M$ ).<sup>3</sup> Plasma levels of 5β-DHP decrease at the onset of spontaneous human labor.<sup>4</sup>

#### References

- 1. Putnam, C.D., Brann, D.W., Kolbeck, R.C., et al. Inhibition of uterine contractility by progesterone and progesterone metabolites: Mediation by progesterone and gamma amino butyric  $\operatorname{acid}_A$  receptor systems. Biol. Reprod. 45(2), 266-272 (1991).
- 2. Bumke-Vogt, C., Bähr, V., Diederich, S., et al. Expression of the progesterone receptor and progesteronemetabolising enzymes in the female and male human kidney. J. Endocrinol. 175(2), 349-364 (2002).
- Morris, K.D., Moorefield, C.N., and Amin, J. Differential modulation of the γ-aminobutyric acid type C receptor by neuroactive steroids. Mol. Pharmacol. 56(4), 752-759 (1999).
- Sheehan, P.M., Rice, G.E., Moses, E.K., et al. 5β-dihydroprogesterone and steroid 5β-reductase decrease in association with human parturition at term. Mol. Hum. Reprod. 11(7), 495-501 (2005).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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