

PRODUCT INFORMATION



4-hydroxy Androstenedione

Item No. 18282

CAS Registry No.: 566-48-3

Formal Name: 4-hydroxy-androst-4-ene-3,17-dione

Synonym: CGP 32349, Formestane, 4-HAD, 4-Hydroxyandrostenedione, 4-Hydroxy-androst-4-ene-3,17-dione, Lentaron, NSC 282175

MF: $C_{19}H_{26}O_3$

FW: 302.4

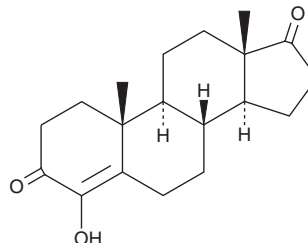
Purity: $\geq 98\%$

UV/Vis.: λ_{\max} : 276 nm

Storage: -20°C

Supplied as: A crystalline solid

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

4-hydroxy Androstenedione (4-HAD) is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-HAD in the solvent of choice. 4-HAD is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of 4-HAD in these solvents is approximately 10, 15, and 25 mg/ml, respectively.

4-HAD is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4-HAD should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 4-HAD has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

4-HAD is a steroidal inhibitor of aromatase (also known as cytochrome P450 19A1; $K_i = 27 \text{ nM}$).¹ As aromatase catalyzes the conversion of androgens to estrogens, aromatase inhibitors, including 4-HAD, are used against hormone-sensitive breast cancer in menopausal women.² They are also abused in combination with anabolic steroids in racehorses and athletes.³ This product is intended for forensic and research applications.

Reference

1. Lesuisse, D., Gourvest, J.F., Hartmann, C., *et al.* Synthesis and evaluation of a new series of mechanism-based aromatase inhibitors. *J. Med. Chem.* **35**(9), 1588-1597 (1992).
2. Smith, I.E. and Dowsett, M. Aromatase inhibitors in breast cancer. *N. Engl. J. Med.* **348**, 2431-2442 (2003).
3. Cawley, A.T., Trout, G.J., Kazlauskas, R., *et al.* The detection of androstenedione abuse in sport: A mass spectrometry strategy to identify the 4-hydroxyandrostenedione metabolite. *Rapid Commun. Mass Spectrom* **22**(24), 4147-4157 (2008).

WARNING

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

SAFETY DATA

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.

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