

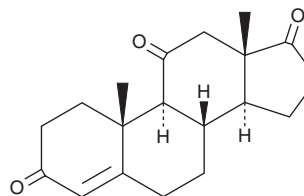
PRODUCT INFORMATION



Adrenosterone

Item No. 45853

CAS Registry No.: 382-45-6
Formal Name: androst-4-ene-3,11,17-trione
Synonyms: 11KA4 11-Ketoandrostenedione, NSC 12166, 11-Oxoandrostenedione, Reichstein's Substance G
MF: $C_{19}H_{24}O_3$
FW: 300.4
Purity: $\geq 98\%$
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years



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

Laboratory Procedures

Adrenosterone is supplied as a solid. A stock solution may be made by dissolving the adrenosterone in the solvent of choice, which should be purged with an inert gas. Adrenosterone is soluble (≥ 10 mg/ml) in chloroform.

Description

Adrenosterone is an androgenic steroid and a metabolite of DHEA (Item No. 10007534) that is produced in the adrenal glands in mammals and teleost fish.^{1,2} It is formed from DHEA *via* the sequential actions of 3β -HSD2, CYP11B1, and 11β -HSD2, with androstenedione and 4-androsten- 11β -ol-3,17-dione (11OHA3; Item No. 30410) as intermediates.^{1,3} Adrenosterone induces androgen receptor transactivation in MDA-kb2 cells expressing the human receptor ($EC_{50} = 469$ nM).² Levels of adrenosterone are increased in LNCaP prostate cancer cells and in the serum of patients with classic 21-hydroxylase deficiency (21OHD), a type of congenital adrenal hyperplasia (CAH) characterized by cortisol deficiency and hypotension.^{3,4}

References

1. Pretorius, E., Arlt, W., and Storbeck, K.-H. A new dawn for androgens: Novel lessons from 11-oxygenated C19 steroids. *Mol. Cell. Endocrinol.* **441**, 76-85 (2017).
2. Rege, J., Nakamura, Y., Satoh, F., *et al.* Liquid chromatography-tandem mass spectrometry analysis of human adrenal vein 19-carbon steroids before and after ACTH stimulation. *J. Clin. Endocrinol. Metab.* **98**(3), 1182-1188 (2013).
3. Swart, A.C., Schloms, L., Storbeck, K.-H., *et al.* 11β -Hydroxyandrostenedione, the product of androstenedione metabolism in the adrenal, is metabolized in LNCaP cells by 5α -reductase yielding 11β -hydroxy- 5α -androstenedione. *J. Steroid Biochem. Mol. Biol.* **138**, 132-142 (2013).
4. Turcu, A.F., Nanba, A.T., Chomic, R., *et al.* Adrenal-derived 11-oxygenated 19-carbon steroids are the dominant androgens in classic 21-hydroxylase deficiency. *Eur. J. Endocrinol.* **174**(5), 601-609 (2016).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM