

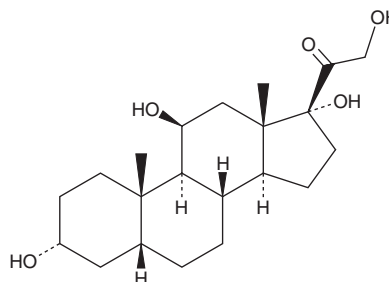
PRODUCT INFORMATION



5 β -Tetrahydrocortisol

Item No. 34195

CAS Registry No.: 53-02-1
Formal Name: (3 α ,5 β ,11 β)-3,11,17,21-tetrahydroxy-pregnan-20-one
Synonym: NSC 57431
MF: C₂₁H₃₄O₅
FW: 366.5
Purity: \geq 98%
Supplied as: A solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

5 β -Tetrahydrocortisol is supplied as a solid. A stock solution may be made by dissolving the 5 β -tetrahydrocortisol in the solvent of choice, which should be purged with an inert gas. 5 β -Tetrahydrocortisol is soluble in the organic solvent chloroform at a concentration of approximately 10 mg/ml. 5 β -Tetrahydrocortisol is soluble in methanol.

Description

5 β -Tetrahydrocortisol is an endogenous metabolite of hydrocortisone (cortisol; Item No. 20739).^{1,2} It is also an intermediate in the biosynthesis of β -cortol (Item No. 33412).² It is formed from cortisol by steroid 5 β -reductase and is dehydrogenated by 20 β -hydroxysteroid dehydrogenase (20 β -HSD) to produce β -cortol in the liver.¹⁻³ Urinary levels of 5 β -tetrahydrocortisol have been used as a marker for cortisol production and are associated with metabolic syndrome in obese individuals.⁴

References

1. Shackleton, C.H.L. Role of a disordered steroid metabolome in the elucidation of sterol and steroid biosynthesis. *Lipids* **47**(1), 1-12 (2012).
2. Schiffer, L., Barnard, L., Baranowski, E.S., et al. Human steroid biosynthesis, metabolism and excretion are differentially reflected by serum and urine steroid metabolomes: A comprehensive review. *J. Steroid Biochem. Mol. Biol.* **194**, 105439 (2019).
3. Kosicka, K., Siemiątkowska, A., Pałka, D., et al. Detailed analysis of cortisol, cortisone and their tetrahydro- and allo-tetrahydro-metabolites in human urine by LC-MS/MS. *J. Pharm. Biomed. Anal.* **140**, 174-181 (2017).
4. Baudrand, R., Campino, C., Carvajal, C.A., et al. Increased urinary glucocorticoid metabolites are associated with metabolic syndrome, hypoadiponectinemia, insulin resistance and β cell dysfunction. *Steroids* **76**(14), 1575-1581 (2011).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/26/2022

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