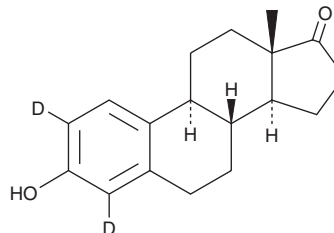


PRODUCT INFORMATION



Estrone-d₂ Item No. 9002844

CAS Registry No.: 350820-16-5
Formal Name: 3-hydroxy-estra-1,3,5(10)-trien-17-one-2,4-d₂
Synonym: E₁-d₂
MF: C₁₈H₂₀D₂O₂
FW: 272.4
Chemical Purity: ≥98% (Estrone)
Deuterium
Incorporation: ≥99% deuterated forms (d₁-d₂); ≤1% d₀
UV/Vis.: λ_{max}: 280 nm
Supplied as: A crystalline 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

Estrone-d₂ is intended for use as an internal standard for the quantification of estrone (Item No. 10006485) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Estrone-d₂ is supplied as a crystalline solid. A stock solution may be made by dissolving the estrone-d₂ in the solvent of choice, which should be purged with an inert gas. Estrone-d₂ is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of estrone-d₂ in these solvents is approximately 20 and 30 mg/ml, respectively.

Description

Estrone is one of the three naturally occurring estrogens, the others being estradiol (Item Nos. ISO60155 | 10006315) and estriol (Item No. 10006484).¹ Estrone is synthesized from androstenedione (Item No. 9001311) by the aromatase enzyme system in the ovaries and placenta, and is also synthesized from estradiol by 17-hydroxy steroid dehydrogenase in the liver.^{1,2} Serum concentrations of estrone in premenopausal women fluctuate according to the menstrual cycle and becomes the most predominant estrogen in postmenopausal women.¹ The binding affinities of estrone to the estrogen receptors α and β are approximately 60% and 37% relative to estradiol.¹

References

1. Gruber, C.J., Tschugguel, W., Schneeberger, C., *et al.* Production and actions of estrogens. *N. Engl. J. Med.* **346**(5), 340-352 (2002).
2. Vance, D.E. Cholesterol and related derivatives. *Biochemistry*. Zubay, G., editor, 2nd edition, Macmillan Publishing Company (1988).

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, 02/06/2024

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