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Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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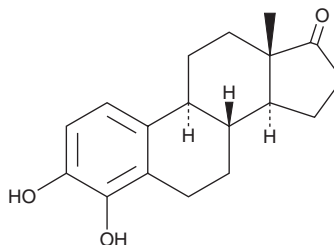
PRODUCT INFORMATION



4-hydroxy Estrone

Item No. 33696

CAS Registry No.: 3131-23-5
Formal Name: 3,4-dihydroxy-estra-1,3,5(10)-trien-17-one
Synonyms: 4-hydroxy E₁, 4-OHE₁
MF: C₁₈H₂₂O₃
FW: 286.4
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

4-hydroxy Estrone is supplied as a solid. A stock solution may be made by dissolving the 4-hydroxy estrone in the solvent of choice, which should be purged with an inert gas. 4-hydroxy Estrone is slightly soluble in ethanol (sonicated) and DMSO.

Description

4-hydroxy Estrone is a metabolite of the endogenous estrogen estrone (Item No. 10006485).¹ It is formed from estrone primarily by the cytochrome P450 (CYP) isoforms CYP1B1, CYP1A2, and CYP1A1. 4-hydroxy Estrone (5 μM) induces nuclear translocation of phosphorylated p53 and is protective against glutamate-induced oxidative death in HT22 hippocampal neuronal cells.² It reduces neurodegeneration induced by kainic acid in the rat hippocampus and improves working memory in the Y-maze in rats when administered at a dose of 10 μg/animal. 4-hydroxy Estrone also inhibits proliferation of MCF-7 and MDA-MB-231 breast cancer cells with IC₅₀ values of 30 and 38 μM, respectively.³

References

1. Cribb, A.E., Knight, M.J., Dryer, D., *et al.* Role of polymorphic human cytochrome P450 enzymes in estrone oxidation. *Cancer Epidemiol. Biomarkers Prev.* **15**(3), 551-558 (2006).
2. Choi, H.J., Lee, A.J., Kang, K.S., *et al.* 4-Hydroxyestrone, an endogenous estrogen metabolite, can strongly protect neuronal cells against oxidative damage. *Sci. Rep.* **10**(1), 7283 (2020).
3. Seeger, H., Huober, J., Wallwiener, D., *et al.* Inhibition of human breast cancer cell proliferation with estradiol metabolites is as effective as with tamoxifen. *Horm. Metab. Res.* **36**(5), 277-280 (2004).

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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