

# Alpha-Estradiol

## Catalog No: tcsc0014231



### Available Sizes

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**Size:** 100mg

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**Size:** 500mg

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### Specifications

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**CAS No:**

57-91-0

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**Formula:**

$C_{18}H_{24}O_2$

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**Pathway:**

Metabolic Enzyme/Protease;Metabolic Enzyme/Protease

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**Target:**

5 alpha Reductase;Endogenous Metabolite

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**Purity / Grade:**

>98%

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**Solubility:**

DMSO : 103.3 mg/mL (379.25 mM; Need ultrasonic)

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**Alternative Names:**

Alfatradiol;Epiestradiol;Epiestrol

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**Observed Molecular Weight:**

272.38

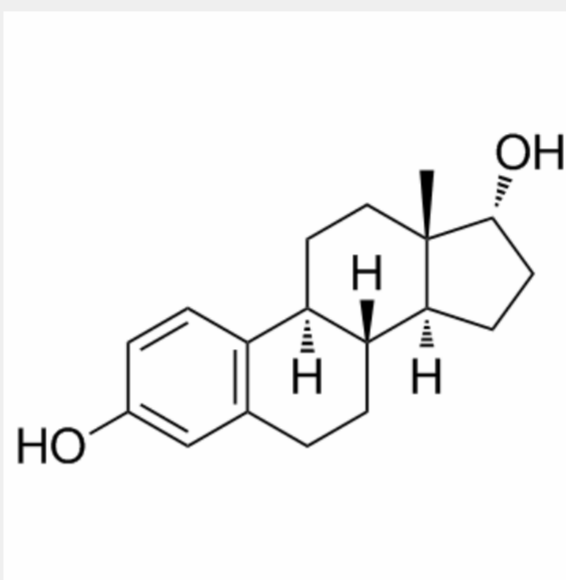
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### Product Description

Alpha-Estradiol is a weak estrogen and a **5 $\alpha$ -reductase** inhibitor which is used as a topical medication in the treatment of androgenic alopecia.

**In Vitro:** Alpha-Estradiol (17 alpha-Estradiol) is a 5 $\alpha$ -reductase inhibitor, and inhibits testosterone metabolism catalyzed by 5 alpha-reductase<sup>[1]</sup>. Alpha-Estradiol (17 Alpha-estradiol, 10  $\mu$ M) attenuates LPS-induced inflammatory markers in both C57BL/6J male and female mouse embryonic fibroblast (MEF) cells, primary pre-adipocytes and differentiated 3T3-L1 adipocytes in an ER $\alpha$ -dependent manner, and such effects are through decreased NF $\kappa$ B-p65 and increased ER $\alpha$  protein expression<sup>[2]</sup>.

**In Vivo:** Alpha-Estradiol (17-alpha-estradiol, 0.01, 0.1, 1  $\mu$ g) significantly reduces the percentage of central avascular/total retina area of the mouse pups. Alpha-Estradiol (1  $\mu$ g) markedly decreases malondialdehyde (MDA) levels on postnatal days (PND) 9, 13, and 17 in retinas of hyperoxia-exposed pups. Alpha-Estradiol (1  $\mu$ g) also decreases the number of NADPH-oxidase-positive cells, NADPH oxidase concentration and activity in retinas of the pups. In the 1.0- $\mu$ g Alpha-Estradiol-treated pups, VEGF retinal concentrations are high on PND 9 but lower on PND 14 and 17. The best effect in retinas of 1.0- $\mu$ g Alpha-Estradiol-treated pups is partly reversed by ICI182780 on PND 14 and 17<sup>[3]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!