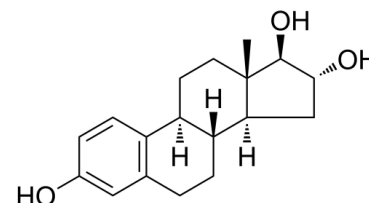


## Data Sheet

<b>Product Name:</b>	Estriol
<b>Cat. No.:</b>	CS-2516
<b>CAS No.:</b>	50-27-1
<b>Molecular Formula:</b>	C <sub>18</sub> H <sub>24</sub> O <sub>3</sub>
<b>Molecular Weight:</b>	288.38
<b>Target:</b>	Endogenous Metabolite; Estrogen Receptor/ERR
<b>Pathway:</b>	Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor
<b>Solubility:</b>	DMSO : 250 mg/mL (866.91 mM; Need ultrasonic); H <sub>2</sub> O : 1 mg/mL (3.47 mM; ultrasonic and warming and heat to 80°C)



### BIOLOGICAL ACTIVITY:

Estriol is an antagonist of the G-protein coupled estrogen receptor in estrogen receptor-negative breast cancer cells. Target: Estrogen Receptor/ERR A recent study shows that estrogen (estrone, estradiol, and estriol) inhibits Alzheimer's disease-associated low-order A $\beta$  oligomer formation, and among them, estriol shows the strongest in vitro activity [1]. In mPTEN<sup>+/-</sup> mice, estriol treatments resulted in a 187.54% gain in the relative ratio of uterine wet weight to body weight; estriol also increases the ratio to 176.88% in wild-type mice [2]. Estriol treatment (20 mg/kg ip), in vivo, sensitizes Kupffer cells to LPS via mechanisms dependent on an increase in CD14 by elevated portal blood endotoxin caused by increased gut permeability in rats; while one-half of the rats given estriol intraperitoneally 24 hours before an injection of a sublethal dose of LPS (5 mg/kg) died within 24 hours [3].

### References:

- [1]. Morinaga, A., et al., Effects of sex hormones on Alzheimer's disease-associated beta-amyloid oligomer formation in vitro. *Exp Neurol*, 2011. 228(2): p. 298-302.
- [2]. Begum, M., et al., Neonatal estrogenic exposure suppresses PTEN-related endometrial carcinogenesis in recombinant mice. *Lab Invest*, 2006. 86(3): p. 286-96.
- [3]. Hewitt, S.C. and K.S. Korach, Estrogenic activity of bisphenol A and 2,2-bis(p-hydroxyphenyl)-1,1,1-trichloroethane (HPTE) demonstrated in mouse uterine gene profiles. *Environ Health Perspect*, 2011. 119(1): p. 63-70.

### CAIndexNames:

Estra-1,3,5(10)-triene-3,16,17-triol, (16 $\alpha$ ,17 $\beta$ )-

### SMILES:

C[C@@]1([C@H]2O)[C@](C[C@H]2O)([H])[C@@](CCC3=C4C=CC(O)=C3)([H])[C@]4([H])CC1

**Caution: Product has not been fully validated for medical applications. For research use only.**

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