

Product Name: β-Estradiol

Catalog No.: 2824

Batch No.: 2

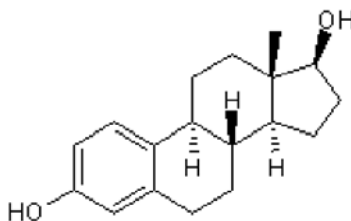
CAS Number: 50-28-2

EC Number: 200-023-8

IUPAC Name: (17β)-Estra-1,3,5(10)-triene-3,17-diol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₂₄O₂·½H₂O
Batch Molecular Weight: 281.39
Physical Appearance: White solid
Solubility: DMSO to 100 mM
ethanol to 75 mM with gentle warming
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.9% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Optical Rotation: [α]_D = +76.8 (Concentration = 1, Solvent = Dioxane)
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	76.83	8.95	
Found	76.72	9.12	

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Endogenous estrogen receptor (ER) agonist (K_i values are 0.12 and 0.13 nM for ER α and ER β respectively). Also high affinity ligand at membrane estrogen GPR30 receptors. α -Estradiol and Deuterated analog also available.

Physical and Chemical Properties:

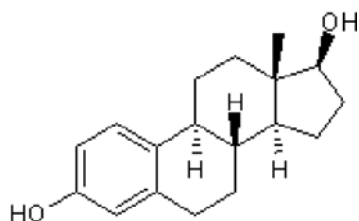
Batch Molecular Formula: C₁₈H₂₄O₂·½H₂O

Batch Molecular Weight: 281.39

Physical Appearance: White solid

Minimum Purity: \geq 99%

Batch Molecular Structure:



Storage: Store at RT

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 75 mM with gentle warming

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Thomas *et al* (2005) Identity of an estrogen membrane receptor coupled to a G protein in human breast cancer cells. *Endocrinology* **146** 624. PMID: 15539556.

Kuiper *et al* (1997) Comparison of the ligand binding specificity and transcript tissue distribution of estrogen receptors α and β . *Endocrinology* **138** 863. PMID: 9048584.

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