

Certificate of Analysis

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Product Name: 2-Methoxyestradiol

Catalog No.: 1807

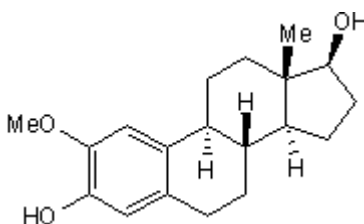
Batch No.: 1

CAS Number: 362-07-2

IUPAC Name: (17 β)-2-Methoxyestra-1,3,5(10)-triene-3,17-diol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₉H₂₆O₃
Batch Molecular Weight: 302.41
Physical Appearance: White crystalline solid
Solubility: DMSO to 50 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.83 (Dichloromethane:Methanol [10:1])
Melting Point: At 194°C
HPLC: Shows 100% purity
¹H NMR: Consistent with structure

Microanalysis:

| | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 75.46 | 8.67 | |
| Found | 75.12 | 8.9 | |

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

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Description:

Apoptotic, antiproliferative and antiangiogenic agent, in vitro and in vivo; acts via an estrogen receptor-independent mechanism. Induces p53-induced apoptosis via two pathways: activation of p38 and NF- κ B; and activation of JNK and AP-1 leading to Bcl-2 phosphorylation. Also upregulates death receptor 5 and binds to tubulin, inhibiting its assembly.

Physical and Chemical Properties:

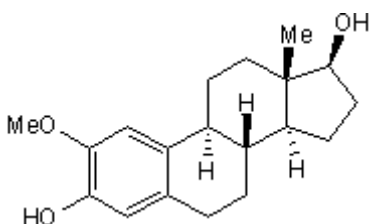
Batch Molecular Formula: C₁₉H₂₆O₃

Batch Molecular Weight: 302.41

Physical Appearance: White crystalline solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

D'Amato et al (1994) 2-Methoxyestradiol, an endogenous mammalian metabolite, inhibits tubulin polymerization by interacting at the colchicine site. *Proc.Natl.Acad.Sci.U.S.A.* **91** 3964. PMID: 8171020.

LaVallee et al (2002) 2-Methoxyestradiol inhibits proliferation and induces apoptosis independently of estrogen receptors α and β . *Cancer Res.* **62** 3691. PMID: 12097276.

LaVallee et al (2003) 2-Methoxyestradiol up-regulates death receptor 5 and induces apoptosis through activation of the extrinsic pathway. *Cancer Res.* **63** 468. PMID: 12543804.

Shimada et al (2003) Roles of p38 and c-jun NH₂-terminal kinase-mediated pathways in 2-methoxyestradiol-induced p53 induction and apoptosis. *Carcinogenesis* **24** 1067. PMID: 12807754.

Storage: Store at RT

Solubility & Usage Info:

DMSO to 50 mM

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.

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