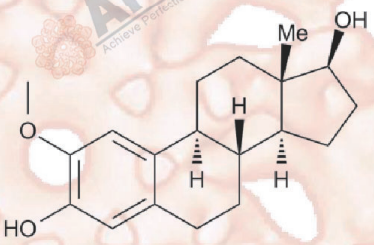
Product Data Sheet

2-Methoxyestradiol (2-MeOE2)

Cat. No.:	A4188
CAS No.:	362-07-2
Formula:	C19H26O3
M.Wt:	302.41
Synonyms:	2-methoxy Estradiol
Target:	Apoptosis
Pathway:	Apoptosis Inducers
Storage:	Store at -20°C



Solvent & Solubility

In Vitro

insoluble in H2O; ⩾15.25 mg/mL in DMSO; ⩾24.25 mg/mL in EtOH with ultrasonic

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	3.3068 mL	16.5338 mL	33.0677 mL
5 mM	0.6614 mL	3.3068 mL	6.6135 mL
10 mM	0.3307 mL	1.6534 mL	3.3068 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Apoptotic, antiproliferative and antiangiogenic agent
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	MDA-MB-435 and SK-OV-3 cells
Preparation method:	The solubility of this compound in DMSO is > 15.3 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months.
Reacting conditions:	0 ~ 20 μM; 48 hrs

	Applications:	In breast carcinoma MDA-MB-435 cells and ovarian carcinoma SK-OV-3 cells, 2-Methoxyestradiol inhibited cellular proliferation, with IC50 values of 1.38 μM and 1.79 μM, respectively.
In Vivo	**Animal experiment**	
	Animal models:	Rats bearing 9L-V6R cells
	Dosage form:	60, 200 or 600 mg/kg/d; i.p.; for 9 days
	Applications:	In rats bearing 9L-V6R cells, 2-Methoxyestradiol significantly decreased HIF-1 activity and inhibited tumor growth in a dose-dependent manner (4-fold reduction for 60 mg/kg/day and 23-fold reduction for 600 mg/kg/day, respectively). The immunohistochemical staining results of tumor tissues further confirmed that 2-Methoxyestradiol dose-dependently down-regulated the gross HIF-1α protein levels. However, at the dose of 600 mg/kg/day, some drug related toxicity occurred, such as diarrhea and weight loss (12 ~ 15%).
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Liu Y, Zou X, et al. "Toxoplasma gondii Cathepsin C1 inhibits NF-κB signalling through the positive regulation of the HIF-1α/EPO axis." Acta Trop. 2019 Jul;195:35-43.PMID:31004564

2. Bao Y, Wang Z, et al. "A feed-forward loop between nuclear translocation of CXCR4 and HIF-1α promotes renal cell carcinoma metastasis." Oncogene. 2018 Sep 3.PMID:30177838

See more customer validations on www.apexbt.com.

References

[1]. Rao PN, Cessac JW, Tinley TL, Mooberry SL. Synthesis and antimitotic activity of novel 2-methoxyestradiol analogs. Steroids. 2002 Dec;67(13-14):1079-89.

[2]. Kang SH, Cho HT, Devi S, Zhang Z, Escuin D, Liang Z, Mao H, Brat DJ, Olson JJ, Simons JW, Lavallee TM, Giannakakou P, Van Meir EG, Shim H. Antitumor effect of 2-methoxyestradiol in a rat orthotopic brain tumor model. Cancer Res. 2006 Dec 15;66(24):11991-7.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage

temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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