



LKT Laboratories, Inc.

2-Hydroxyestradiol

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Product Information

Product ID H9816

CAS No. 362-05-0

Chemical Name

Synonym 2-OH E2, NSC61711, 2-HE2

Formula $C_{18}H_{24}O_3$

Formula Wt. 288.38

Melting Point

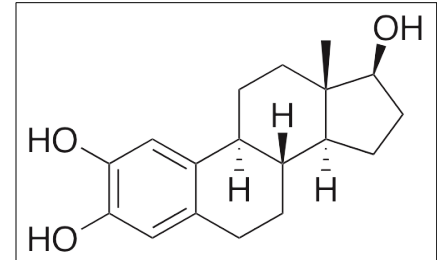
Purity $\geq 98\%$

Solubility

Store Temp $-20^{\circ}C$

Ship Temp Ambient

Description 2-Hydroxy estradiol (2-OH E2) is a cytochrome P450 metabolite of estradiol with low affinity for estrogen receptors. 2-OH E2 exhibits anti-inflammatory, neuroprotective, mitogenic, and potentially anti-angiogenic activities. In vitro, 2-OH E2 decreases release of prostaglandin E2 (PGE2). In hippocampal HT22 cells, 2-OH E2 decreases cellular lipid peroxidation and cell death induced by hydrogen peroxide. Additionally, 2-OH E2 displays mitogenic effects on vascular smooth muscle cells after conversion to methoxyestradiols and catecholestradiols via cytochrome P450 and catechol-O-methyltransferase (COMT) enzymes. Similar compound 2-methoxy estradiol (2-ME2) has achieved considerable attention as an anticancer chemotherapeutic and anti-angiogenic agent through inhibition of the HIF-1 α pathway.



Bulk quantities available upon request

Product ID	Size
H9816	1 mg
H9816	5 mg
H9816	10 mg

References Pavan B, Paganetto G, Dalpiaz A, et al. Estrogen metabolites in the release of inflammatory mediators from human amnion-derived cells. *Life Sci.* 2011 Mar 14;88(11-12):551-8. PMID: 21277863.

Becker CM, Rohwer N, Funakoshi T, et al. 2-methoxyestradiol inhibits hypoxia-inducible factor-1{alpha} and suppresses growth of lesions in a mouse model of endometriosis. *Am J Pathol.* 2008 Feb;172(2):534-44. PMID: 18202195.

Dubey RK, Jackson EK, Gillespie DG, et al. Catecholamines block the antimitogenic effect of estradiol on human coronary artery smooth muscle cells. *J Clin Endocrinol Metab.* 2004 Aug;89(8):3922-31. PMID: 15292328.

Zacharia LC, Piché CA, Fielding RM, et al. 2-hydroxyestradiol is a prodrug of 2-methoxyestradiol. *J Pharmacol Exp Ther.* 2004 Jun;309(3):1093-7. PMID: 14872091.

Teepker M, Anthes N, Krieg JC, et al. 2-OH-estradiol, an endogenous hormone with neuroprotective functions. *J Psychiatr Res.* 2003 Nov-Dec;37(6):517-23. PMID: 14563383.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.