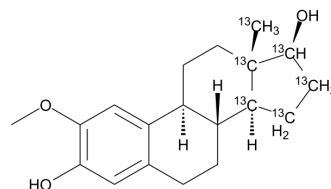


2-Methoxyestradiol-¹³C₆

Cat. No.:	HY-12033S1
Molecular Formula:	C ₁₃ ¹³ C ₆ H ₂₆ O ₃
Molecular Weight:	308.36
Target:	Microtubule/Tubulin; Apoptosis; Autophagy; Endogenous Metabolite; Reactive Oxygen Species; Isotope-Labeled Compounds
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton; Apoptosis; Autophagy; Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB; Others
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



BIOLOGICAL ACTIVITY

Description	2-Methoxyestradiol- ¹³ C ₆ is the ¹³ C-labeled 2-Methoxyestradiol. 2-Methoxyestradiol (2-ME2), an orally active endogenous metabolite of 17β-estradiol (E2), is an apoptosis inducer and an angiogenesis inhibitor with potent antineoplastic activity. 2-Methoxyestradiol also destabilize microtubules. 2-Methoxyestradiol, also a potent superoxide dismutase (SOD) inhibitor and a ROS-generating agent, induces autophagy in the transformed cell line HEK293 and the cancer cell lines U87 and HeLa[1][2][3][4][5][6].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Kang SH, et al. Antitumor effect of 2-methoxyestradiol in a rat orthotopic brain tumor model. *Cancer Res.* 2006, 66(24),11991-11997.
- [3]. Aquino-Gálvez A, et al. Effects of 2-methoxyestradiol on apoptosis and HIF-1α and HIF-2α expression in lung cancer cells under normoxia and hypoxia. *Oncol Rep.* 2016 Jan;35(1):577-83.
- [4]. Kamath K, et al. 2-Methoxyestradiol suppresses microtubule dynamics and arrests mitosis without depolymerizing microtubules. *Mol Cancer Ther.* 2006 Sep;5(9):2225-33.
- [5]. Xu L, et al. 2-Methoxyestradiol Alleviates Experimental Autoimmune Uveitis by Inhibiting Lymphocytes Proliferation and T Cell Differentiation. *Biomed Res Int.* 2016;2016:7948345.
- [6]. Chen Y, et al. Oxidative stress induces autophagic cell death independent of apoptosis in transformed and cancer cells. *Cell Death Differ.* 2008;15(1):171-182.
- [7]. LaVallee TM, et al. 2-Methoxyestradiol inhibits proliferation and induces apoptosis independently of estrogen receptors alpha and beta. *Cancer Res.* 2002 Jul 1;62(13):3691-7.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA