Estriol-d_2

Cat. No.: HY-B0412S

CAS No.: 53866-32-3

Molecular Formula: $C_{18}H_{22}D_2O_3$

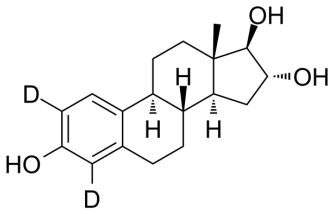
Molecular Weight: 290.39

Target: Estrogen Receptor/ERR; Endogenous Metabolite

Pathway: Vitamin D Related/Nuclear Receptor; Metabolic Enzyme/Protease

Storage: 4°C, stored under nitrogen

* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (860.91 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.4436 mL	17.2182 mL	34.4364 mL
	5 mM	0.6887 mL	3.4436 mL	6.8873 mL
	10 mM	0.3444 mL	1.7218 mL	3.4436 mL

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

BIOLOGICAL ACTIVITY

Description

Estriol-d_2 is the deuterium labeled Estriol. Estriol is an antagonist of the G-protein coupled estrogen receptor in estrogen receptor-negative breast cancer cells.

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]. Morinaga, A., et al., Effects of sex hormones on Alzheimer's disease-associated beta-amyloid oligomer formation in vitro. Exp Neurol, 2011. 228(2): p. 298-302.

[3]. Begum, M., et al., Neonatal estrogenic exposure suppresses PTEN-related endometrial carcinogenesis in recombinant mice. Lab Invest, 2006. 86(3): p. 286-96.

[4]. Hewitt, S.C. and K.S. Korach, Estrogenic activity of bisphenol A and 2,2-bis(p-hydroxyphenyl)-1,1,1-trichloroethane (HPTE) demonstrated in mouse uterine gene profiles. Environ Health Perspect, 2011. 119(1): p. 63-70.

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