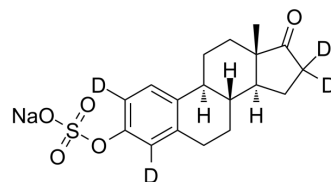


Estrone sulfate-d₄ sodium

Cat. No.:	HY-113293BS1
CAS No.:	285979-80-8
Molecular Formula:	C ₁₈ H ₁₇ D ₄ NaO ₅ S
Molecular Weight:	376.44
Target:	Estrogen Receptor/ERR; Endogenous Metabolite; Estrogen Receptor/ERR; Endogenous Metabolite
Pathway:	Vitamin D Related/Nuclear Receptor; Metabolic Enzyme/Protease
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	Estrone sulfate-d ₄ (sodium) is deuterium labeled Estrone sulfate (sodium). Estrone sulfate, a biologically inactive form of estrogen, is a major circulating plasma estrogen that is converted into the biologically active estrogen, estrone (E1) by steroid sulfatase (STS). Estrone sulfate can be used for the research of breast cancer[1][2].
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]. Duncan L, et al. Inhibition of estrone sulfatase activity by estrone-3-methylthiophosphonate: a potential therapeutic agent in breast cancer. *Cancer Res.* 1993;53(2):298-303.
- [2]. Karakus E, et al. Estrone-3-Sulfate Stimulates the Proliferation of T47D Breast Cancer Cells Stably Transfected With the Sodium-Dependent Organic Anion Transporter SOAT (SLC10A6). *Front Pharmacol.* 2018;9:941. Published 2018 Aug 21.
- [3]. Nakamura Y, et al. Steroid sulfatase and estrogen sulfotransferase in the atherosclerotic human aorta. *Am J Pathol.* 2003;163(4):1329-1339.
- [4]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.

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

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