# Estrone-$d_4$

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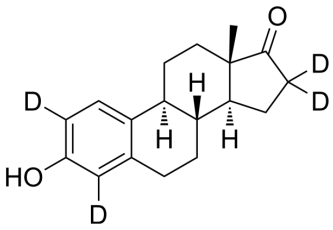
| **Cat. No.:** | HY-B0234S2 |
| **CAS No.:** | 53866-34-5 |
| **Molecular Formula:** | $C_{18}H_{18}D_4O_2$ |
| **Molecular Weight:** | 274.39 |
| **Target:** | Estrogen Receptor/ERR; Endogenous Metabolite |
| **Pathway:** | Vitamin D Related/Nuclear Receptor; Metabolic Enzyme/Protease |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent -80°C 6 months<br>-20°C 1 month |




## BIOLOGICAL ACTIVITY

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| **Description** | Estrone-$d_4$ is the deuterium labeled Estrone. Estrone (E1) is a natural estrogenic hormone. Estrone is the main representative of the endogenous estrogens and is produced by several tissues, especially adipose tissue. Estrone is the result of the process of aromatization of androstenedione that occurs in fat cells[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].<br>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]. Caupos E, et al. Photodegradation of estrone enhanced by dissolved organic matter under simulated sunlight. Water Res. 2011;45(11):3341-3350.

[3]. de Padua Mansur A, et al. Long-term prospective study of the influence of estrone levels on events in postmenopausal women with or at high risk for coronary artery disease. ScientificWorldJournal. 2012;2012:363595.

**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