Product Data Sheet

5β-Dihydrocortisol-d6

Molecular Weight: 370.51

Target: Apoptosis; Drug Metabolite

Pathway: Apoptosis; Metabolic Enzyme/Protease

Storage: Please store the product under the recommended conditions in the Certificate of

Analysis.

BIOLOGICAL ACTIVITY

Description	5β -Dihydrocortisol-d6 is the deuterium labeled 5β -Dihydrocortisol. 5β -Dihydrocortisol, a metabolite of Cortisol, is a potential mineralocorticoid. 5β -Dihydrocortisol can potentiate glucocorticoid activity in raising the intraocular pressure. 5β -Dihydrocortisol causes breast cancer cell apoptosis [1][2][3][4][5].
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]. Marver D, et, al. Dihydrocortisol: a potential mineralocorticoid. J Steroid Biochem. 1978 Jan;9(1):1-7.
- [3]. Kallubai M, et, al. Spectroscopic evaluation of synthesized 5β -dihydrocortisol and 5β -dihydrocortisol acetate binding mechanism with human serum albumin and their role in anticancer activity. J Biomol Struct Dyn. 2019 Feb;37(3):623-640.
- [4]. Southren AL, et, al. 5 beta-Dihydrocortisol: possible mediator of the ocular hypertension in glaucoma. Invest Ophthalmol Vis Sci. 1985 Mar;26(3):393-5.
- [5]. Appanna N, et, al. Differential activity and expression of human 5β-reductase (AKR1D1) splice variants. J Mol Endocrinol. 2021 Mar;66(3):181-194.
- $[6]. We instein BI, et, al.\ Potentiation\ of\ glucocorticoid\ activity\ by\ 5\ beta-dihydrocortisol:\ its\ role\ in\ glaucoma.\ Science.\ 1983\ Oct\ 14;222(4620):172-3.$

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

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