Hydrocortisone-d_3

Cat. No.: HY-N0583S3

CAS No.: 115699-92-8

Molecular Formula: $C_{21}H_{27}D_3O_5$

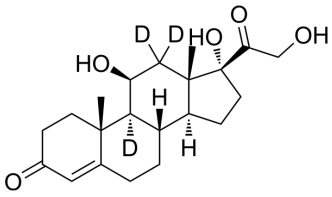
Molecular Weight: 365.48

Target: Glucocorticoid Receptor; Endogenous Metabolite

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

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : ≥ 0.1 mg/mL (0.27 mM)
H_2O : ≥ 0.1 mg/mL (0.27 mM)
* "≥" means soluble, but saturation unknown.

BIOLOGICAL ACTIVITY

Description

Hydrocortisone-d_3 is the deuterium labeled Hydrocortisone. Hydrocortisone (Cortisol) is a steroid hormone or glucocorticoid secreted by the adrenal cortex[1].

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]. Bellinghausen I, et al. Inhibition of human allergic T-cell responses by IL-10-treated dendritic cells: differences from hydrocortisone-treated dendritic cells. J Allergy Clin Immunol. 2001 Aug;108(2):242-9.

[3]. Chappell D, et al. Hydrocortisone preserves the vascular barrier by protecting the endothelial glycocalyx. Anesthesiology. 2007 Nov;107(5):776-84.

[4]. Förster C, et al. Differential effects of hydrocortisone and TNFalpha on tight junction proteins in an in vitro model of the human blood-brain barrier. J Physiol. 2008 Apr 1;586(7):1937-49.

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

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