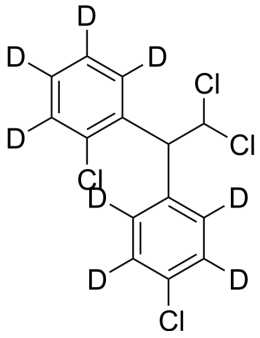
Mitotane-d_8

Cat. No.:	HY-13690S2
CAS No.:	2673270-14-7
Molecular Formula:	$C_{14}H_2D_8Cl_4$
Molecular Weight:	328.09
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Mitotane-d_8 is the deuterium labeled Mitotane[1]. Mitotane (2,4'-DDD), an isomer of DDD and derivative of dichlorodiphenyltrichloroethane (DDT), is an antineoplastic agent, can be used to research adrenocortical carcinoma. Mitotane exert its adrenocorticolytic effect at least in part through lipotoxicity induced by intracellular free cholesterol (FC) accumulation. Mitotane can have direct pituitary effects on corticotroph cells. Mitotane can induce CYP3A4 gene expression via steroid and xenobiotic receptor (SXR) activation, and has agent-agent interactions[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 Feb;53(2):211-216.

[2]. Takeshita A, Igarashi-Migitaka J, Koibuchi N, Mitotane induces CYP3A4 expression via activation of the steroid and xenobiotic receptor. J Endocrinol. 2013 Feb 15;216(3):297-305.

[3]. Doghman M, et al. Lack of long-lasting effects of mitotane adjuvant therapy in a mouse xenograft model of adrenocortical carcinoma. Mol Cell Endocrinol. 2013 Dec 5;381(1-2):66-9.

[4]. Zatelli MC, et al. Therapeutic concentrations of mitotane (o,p'-DDD) inhibit thyrotroph cell viability and TSH expression and secretion in a mouse cell line model. Endocrinology. 2010 Jun;151(6):2453-61.

[5]. Warde KM, et al. Mitotane Targets Lipid Droplets to Induce Lipolysis in Adrenocortical Carcinoma. Endocrinology. 2022 Sep 1;163(9):bqac102.

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