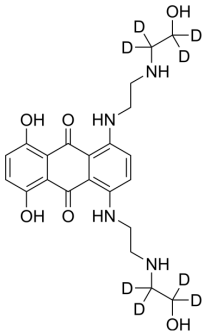
Mitoxantrone-d_8

Cat. No.:	HY-13502S
CAS No.:	1189974-82-0
Molecular Formula:	$C_{22}H_{20}D_8N_4O_6$
Molecular Weight:	452.53
Target:	Topoisomerase; PKC; Isotope-Labeled Compounds
Pathway:	Cell Cycle/DNA Damage; Epigenetics; TGF-beta/Smad; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Mitoxantrone-d_8 (mitozantrone-d8) is the deuterium labeled Mitoxantrone. Mitoxantrone is a topoisomerase II inhibitor and also inhibits protein kinase C (PKC) activity with an IC50 of 8.5 μM[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]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Takeuchi N, et al. Inhibitory effect of mitoxantrone on activity of protein kinase C and growth of HL60 cells. J Biochem. 1992 Dec;112(6):762-7.

[3]. Bellosillo B, et al. Mitoxantrone, a topoisomerase II inhibitor, induces apoptosis of B-chronic lymphocytic leukaemia cells. Br J Haematol. 1998 Jan;100(1):142-6.

[4]. Vibet S, et al. Differential subcellular distribution of mitoxantrone in relation to chemosensitization in two human breast cancer cell lines. Drug Metab Dispos. 2007 May;35(5):822-8.

[5]. Fujimoto S, et al. Antitumor activity of mitoxantrone against murine experimental tumors: comparative analysis against various antitumor antibiotics. Cancer Chemother Pharmacol. 1982;8(2):157-62.

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