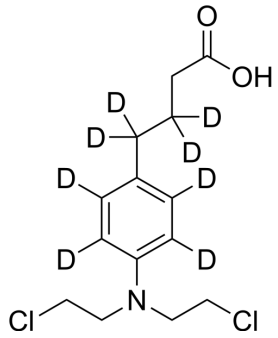
Chlorambucil-d_8-1

Cat. No.:	HY-13593S1
Molecular Formula:	$C_{14}H_{11}D_8Cl_2NO_2$
Molecular Weight:	312.26
Target:	DNA Alkylator/Crosslinker; Isotope-Labeled Compounds
Pathway:	Cell Cycle/DNA Damage; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Chlorambucil-d_8-1 is the deuterium labeled Chlorambucil. Chlorambucil (CB-1348), an orally active antineoplastic agent, is a bifunctional alkylating agent belonging to the nitrogen mustard group. Chlorambucil can be used for the research of lymphocytic leukemia, ovarian and breast carcinomas, and Hodgkin's disease[1][2][3][4].
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]. Guo JX, et al. Synergistic effects of chlorambucil and TRAIL on apoptosis and proliferation of Raji cells. Eur Rev Med Pharmacol Sci. 2017 Oct;21(20):4703-4710.

[3]. Salem FS, et al. Biochemical and pathological studies on the effects of levamisole and chlorambucil on Ehrlich ascites carcinoma-bearing mice. Vet Ital. 2011 Jan-Mar;47(1):89-95.

[4]. Mohamed D, et al. Chlorambucil-adducts in DNA analyzed at the oligonucleotide level using HPLC-ESI MS. Chem Res Toxicol. 2009;22(8):1435-1446.

[5]. Birnbaum AD, et al. Chlorambucil and malignancy. Ophthalmology. 2010;117(7):1466-1466.e1.

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