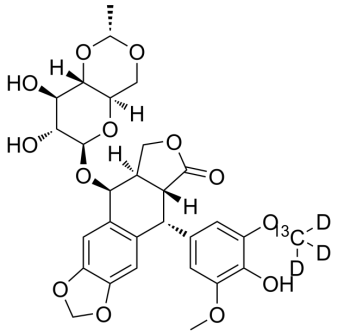
Etoposide-$^{13}C,d_3$

Cat. No.:	HY-13629S1
Molecular Formula:	$C_{28}{}^{13}CH_{29}D_3O_{13}$
Molecular Weight:	592.57
Target:	Apoptosis; Topoisomerase; Bacterial; Autophagy; Mitophagy; Antibiotic; Isotope-Labeled Compounds
Pathway:	Apoptosis; Cell Cycle/DNA Damage; Anti-infection; Autophagy; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Etoposide-$^{13}C,d_3$ is the ^{13}C- and deuterium labeled Etoposide. Etoposide (VP-16; VP-16-213) is an anti-cancer chemotherapy agent. Etoposide inhibits topoisomerase II, thus stopping DNA replication. Etoposide induces cell cycle arrest, apoptosis and autophagy[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[65]. 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):211-223.

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[3]. Cui D, et al. FBXW7 Confers Radiation Survival by Targeting p53 for Degradation.Cell Rep. 2020 Jan 14;30(2):497-509.e4.

[4]. Fuchs, J., et al. Comparative activity of NSC 119875, NSC 109724, NSC 123127, NSC 241240, and etoposide in heterotransplanted hepatoblastoma. Cancer, 1998. 83(11): p. 2400-7.

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[6]. Lee KI, et al. Etoposide induces pancreatic β-cells cytotoxicity via the JNK/ERK/GSK-3 signaling-mediated mitochondria-dependent apoptosis pathway. Toxicol In Vitro. 2016 Jul 26. pii: S0887-2333(16)30147-3.

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