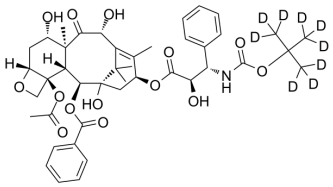
Docetaxel-d_9

Cat. No.:	HY-B0011S
CAS No.:	940867-25-4
Molecular Formula:	$C_{43}H_{44}D_9NO_{14}$
Molecular Weight:	816.93
Target:	Microtubule/Tubulin; Apoptosis; Endogenous Metabolite
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton; Apoptosis; Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	Docetaxel-d_9 is the deuterium labeled Docetaxel. Docetaxel (RP-56976) is a microtubule depolymerization inhibitor, with an IC50 of 0.2 μM. Docetaxel attenuates the effects of bcl-2 and bcl-xL gene expression. Docetaxel arrests the cell cycle at G2/M and leads to cell apoptosis. Docetaxel has anti-cancer activity[1][3].
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]. Attia RT, et al. The chemomodulatory effects of glufosfamide on docetaxel cytotoxicity in prostate cancer cells. PeerJ. 2016 Jun 29;4:e2168.;Che CL, et al. DNA microarray reveals different pathways responding to NSC 125973 and docetaxel in non-small cell

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