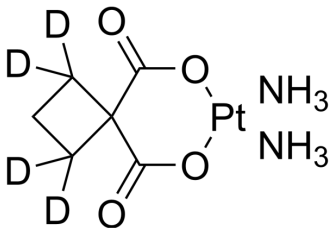
Carboplatin-d_4

Cat. No.:	HY-17393S
Molecular Formula:	$C_6H_8D_4N_2O_4Pt$
Molecular Weight:	375.28
Target:	DNA Alkylator/Crosslinker; Autophagy; DNA/RNA Synthesis; Isotope-Labeled Compounds
Pathway:	Cell Cycle/DNA Damage; Autophagy; Others
Storage:	-20°C, stored under nitrogen, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen, away from moisture)



BIOLOGICAL ACTIVITY

Description	Carboplatin-d_4 is the deuterium labeled Carboplatin. Carboplatin (NSC 241240) is a DNA synthesis inhibitor which binds to DNA, inhibits replication and transcription and induces cell death. Carboplatin (NSC 241240) is a derivative of CDDP and a potent anti-cancer agent.
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.

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[3]. Banerji U, et al. An in vitro and in vivo study of the combination of the heat shock protein inhibitor 17-allylamino-17-demethoxygeldanamycin and carboplatin in human ovarian cancer models. Cancer Chemother Pharmacol. 2008 Oct;62(5):769-78.

[4]. Clark CC, et al. Enhancement of synthetic lethality via combinations of ABT-888, a PARP inhibitor, and carboplatin in vitro and in vivo using BRCA1 and BRCA2 isogenic models. Mol Cancer Ther. 2012 Sep;11(9):1948-58.

[5]. Dela Cruz FS, et al. A case study of an integrative genomic and experimental therapeutic approach for rare tumors: identification of vulnerabilities in a pediatric poorly differentiated carcinoma. Genome Med. 2016 Oct 31;8(1):116.

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