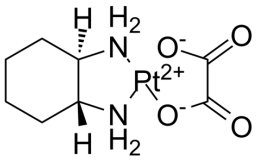
(rel)-Oxaliplatin

Cat. No.:	HY-17371A
CAS No.:	63121-00-6
Molecular Formula:	$C_8H_{14}N_2O_4Pt$
Molecular Weight:	397.29
Target:	DNA/RNA Synthesis; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



Relative Stereochemistry

BIOLOGICAL ACTIVITY

Description

(rel)-Oxaliplatin is a DNA synthesis inhibitor. (rel)-Oxaliplatin causes DNA crosslinking damage, prevents DNA replication and transcription and induces apoptosis. (rel)-Oxaliplatin can be used for cancer research[1][2][3].

In Vitro

(rel)-Oxaliplatin (24-72 hours; 2-128 μM; HCC, HCCLM3 and Hep3B cells) inhibits cell growth and induces apoptosis[1].
(rel)-Oxaliplatin (10 μM; 15-240 mins; CEM cells) induces primary and secondary DNA lesions, including DNA cross-links (ISC) and DNA-protein cross-links (DPC)[2].
(rel)-Oxaliplatin (0.01 to 100 μM; 24 hours) potently inhibits bladder carcinoma cell lines RT4 and TCCSUP, ovarian carcinoma cell line A2780, colon carcinoma cell line HT-29, glioblastoma cell lines U-373MG and U-87MG, and melanoma cell lines SK-MEL-2 and HT-144 with IC_{50} of 11 μM, 15 μM, 0.17 μM, 0.97 μM, 2.95 μM, 17.6 μM, 30.9 μM and 7.85 μM, respectively[3]
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	HCC, HCCLM3 and Hep3B cells
Concentration:	24, 48 and 72 hours
Incubation Time:	2, 4, 8, 16, 32, 64 and 128 μM
Result:	Decreased cell viability in a dose- and time-dependent manner.

Western Blot Analysis[1]

Cell Line:	HCCLM3 and Hep3B cells
Concentration:	48 hours
Incubation Time:	10 μM
Result:	Down-regulated the expression of Bcl-2 and Bcl-xL, and increased the expression of Bax.

Cell Cycle Analysis[1]

Cell Line:	HCCLM3 and Hep3B cells
Concentration:	24 hours

Incubation Time:	10 μM
Result:	Increased the percentage of apoptotic cells (17.70% for HCCLM3 cells; 21.19% for Hep3B cells).

In Vivo

(rel)-Oxaliplatin (5-10 mg/kg; i.p.; for 32 days; nude mice) inhibits tumor growth[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Nude mice[1]
Dosage:	5 and 10 mg/kg
Administration:	Intraperitoneal injection; for 32 days
Result:	Reduced tumor volume in HCCLM3 tumor xenografts.

REFERENCES

[1]. Woynarowski JM, et, al. Oxaliplatin-induced damage of cellular DNA. Mol Pharmacol. 2000 Nov;58(5):920-7.

[2]. Wang Z, et, al. Oxaliplatin induces apoptosis in hepatocellular carcinoma cells and inhibits tumor growth. Expert Opin Investig Drugs. 2009 Nov;18(11):1595-604.

[3]. Pendyala L, et, al. In vitro cytotoxicity, protein binding, red blood cell partitioning, and biotransformation of oxaliplatin. Cancer Res. 1993 Dec 15;53(24):5970-6.

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