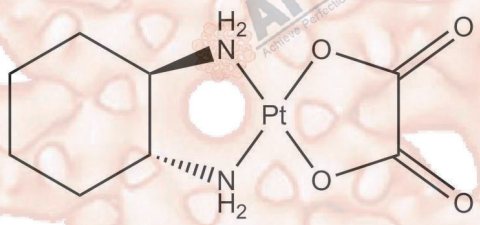
Oxaliplatin

Cat. No.: A8648
CAS No.: 61825-94-3
Formula: C8H14N2O4Pt
M.Wt: 397.29
Synonyms:
Target: DNA Damage/DNA Repair
Pathway: DNA Synthesis
Storage: Store at -20°C



Solvent & Solubility

insoluble in EtOH; ≥3.94 mg/mL in H2O with gentle warming

In Vitro — Preparing Stock Solutions

Concentration \ Solvent \ Mass	1mg	5mg	10mg
1 mM	2.5171 mL	12.5853 mL	25.1705 mL
5 mM	0.5034 mL	2.5171 mL	5.0341 mL
10 mM	0.2517 mL	1.2585 mL	2.5171 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Antitumor agent
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	Carcinoma cell lines
Preparation method:	Limited soluble in DMSO. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	1-24h
Applications:	Oxaliplatin effectively inhibited 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 IC50 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.Oxaliplatin was active against C32 and G361 cell lines with IC50 values of 49.48 and 9.07 μM (1 h), 9.47 and 1.30 μM (4 h), and 0.98 and 0.14 μM (24 h).
In Vivo	**Animal experiment**	
	Animal models:	Nude mice bearing hepatocellular HCCLM3 tumors, Mice bearing L1210 leukemia, MA 16-C xenografts, B16 melanoma xenografts, Lewis lung xenografts and C26 colon carcinoma xenografts.
	Dosage form:	Intraperitoneal injection, 10 mg/kg, weekly injection; 5 mg/kg, Intravenous injection, on days 1, 5 and 9
	Applications:	Oxaliplatin significantly reduced tumor volume and apoptotic index in nude mice bearing hepatocellular HCCLM3 tumors. Oxaliplatin (5 mg/kg, i.v. on days 1, 5 and 9) was active on T-leukemia-lymphoma L40 AKR with T/C of 1.77. Oxaliplatin was also efficient on intracerebrally grafted L1210 leukemia, B16 melanoma xenografts, MA 16-C xenografts, Lewis lung xenografts and C26 colon carcinoma xenografts. Oxaliplatin induced impairment of retrograde neuronal transport in mice.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Feng M, Jin JQ, et al. "Pharmacological inhibition of β-catenin/BCL9 interaction overcomes resistance to immune checkpoint blockades by modulating T(reg) cells." Sci Adv. 2019 May 8;5(5):eaau5240.PMID:31086813

2. Cho SY, Chae J, et al. "Unstable Genome and Transcriptome Dynamics during Tumor Metastasis Contribute to Therapeutic Heterogeneity in Colorectal Cancers." Clin Cancer Res. 2019 Jan 22.PMID:30670495

3. Goodspeed A, Jean A, et al. "A Whole-genome CRISPR Screen Identifies a Role of MSH2 in Cisplatin-mediated Cell Death in Muscle-invasive Bladder Cancer." Eur Urol. 2019 Feb;75(2):242-250.PMID:30414698

4. Andrew Goodspeed, Annie Jean, et al. "Low MSH2 protein levels identify muscle-invasive bladder cancer resistant to cisplatin." bioRxiv. 2018 June 29.

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References

[1]. Mohammed M Q, Retsas S. Oxaliplatin is active in vitro against human melanoma cell lines: comparison with cisplatin and carboplatin[J]. Anti-cancer drugs, 2000, 11(10): 859-863.

[2]. Pendyala L, Creaven P J. In vitro cytotoxicity, protein binding, red blood cell partitioning, and biotransformation of oxaliplatin[J]. Cancer research, 1993, 53(24): 5970-5976.

[3]. Wang Z, Zhou J, Fan J, et al. Oxaliplatin induces apoptosis in hepatocellular carcinoma cells and inhibits tumor growth[J]. Expert opinion on investigational drugs, 2009, 18(11): 1595-1604.

[4]. Mathe G, Kidani Y, Segiguchi M, et al. Oxalato-platinum or 1-OHP, a third-generation platinum complex: an experimental and clinical appraisal and preliminary comparison with cis-platinum and carboplatinum[J]. Biomedicine & pharmacotherapy, 1989, 43(4): 237-250.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

APExBIO Technology
www.apexbt.com
7505 Fannin street, Suite 410, Houston, TX 77054.
Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com