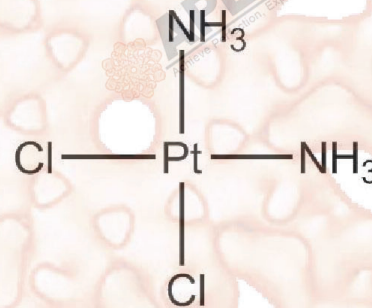


Product Data Sheet

Cisplatin

| | |
|------------------|---|
| Cat. No.: | A8321 |
| CAS No.: | 15663-27-1 |
| Formula: | Cl ₂ H ₆ N ₂ Pt |
| M.Wt: | 300.05 |
| Synonyms: | CDDP |
| Target: | Apoptosis |
| Pathway: | Caspase |
| Storage: | Store at RT It is recommended to store in the form of powder in the dark, the solution is very unstable (Prepare Solution fresh and use at room temperature), DMF is recommended, DMSO can inactivate Cisplatin's activity. |



Solvent & Solubility

insoluble in EtOH; insoluble in H₂O; ≥12.5 mg/mL in DMF

In Vitro

| Preparing Stock Solutions | Solvent | Mass | Concentration | | |
|---------------------------|---------|------|---------------|------------|------------|
| | | | 1mg | 5mg | 10mg |
| | 1 mM | | 3.3328 mL | 16.6639 mL | 33.3278 mL |
| | 5 mM | | 0.6666 mL | 3.3328 mL | 6.6656 mL |
| | 10 mM | | 0.3333 mL | 1.6664 mL | 3.3328 mL |

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

Biological Activity

Shortsummary

Inhibits DNA synthesis, chemotherapy drug

IC₅₀ & Target

Cell Viability Assay

In Vitro

| | |
|---------------------|---|
| Cell Line: | L1210/0 cells |
| Preparation method: | The solubility of this compound in DMF is >12.5 mM. 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. |

| | | |
|---------|--------------------------|--|
| | Reacting conditions: | 0, 0.5, 1, 2, 4 and 8 µg/mL; 2 hrs |
| | Applications: | At low concentrations, Cisplatin induced minimal cell death. At higher concentrations, cell death was obvious with only 4% viability. By 10 days after incubation, these few survivors begun to grow and became the predominant cells in the population. |
| In Vivo | Animal experiment | |
| | Animal models: | Nude mice bearing human ovarian cancer OVCAR-3 cell xenografts |
| | Dosage form: | 5 mg/kg, i.v.; at day 0 and day 7 |
| | Applications: | Cisplatin (5 mg/kg) given at the day 0 and 7 induced a tumor growth inhibition (GI) (85.1%) of the OVCAR-3 cell xenografts. |
| | 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

- Chen Z, Tian D, et al. "Apigenin Combined With Gefitinib Blocks Autophagy Flux and Induces Apoptotic Cell Death Through Inhibition of HIF-1 α , c-Myc, p-EGFR, and Glucose Metabolism in EGFR L858R+T790M-Mutated H1975 Cells." Front Pharmacol. 2019 Mar 22;10:260.PMID:30967777
- Zhang B, Cui B, et al. "ATR activated by EB virus facilitates chemotherapy resistance to cisplatin or 5-fluorouracil in human nasopharyngeal carcinoma." Cancer Manag Res. 2019 Jan 9;11:573-585.PMID:30666155
- Wu Q, Wei X, et al. "Bionic 3D spheroids biosensor chips for high-throughput and dynamic drug screening." Biomed Microdevices. 2018 Sep 15;20(4):82.PMID:30220069
- Yeo SK, Paul R, et al. "Improved efficacy of mitochondrial disrupting agents upon inhibition of autophagy in a mouse model of BRCA1-deficient breast cancer." Autophagy. 2018;14(7):1214-1225.PMID:29938573
- Sharma K, Vu TT, et al. "p53-independent Noxa induction by cisplatin is regulated by ATF3/ATF4 in head and neck squamous cell carcinoma cells." Mol Oncol. 2018 Jan 19.PMID:29352505

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References

- [1]. Sorenson CM, Eastman A. Mechanism of cis-diamminedichloroplatinum(II)-induced cytotoxicity: role of G2 arrest and DNA double-strand breaks. Cancer Res. 1988 Aug 15;48(16):4484-8.
- [2]. Molthoff CF, Pinedo HM, Schlüper HM, Rutgers DH, Boven E. Comparison of 131I-labelled anti-episialin 139H2 with cisplatin, cyclophosphamide or external-beam radiation for anti-tumor efficacy in human ovarian cancer xenografts. Int J Cancer. 1992 Apr 22;51(1):108-15.

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

