

Cisplatin

Catalog No: tcsc1122



Available Sizes

Size: 100mg

Size: 500mg



Specifications

CAS No:

15663-27-1

Formula:

$\text{Cl}_2\text{H}_6\text{N}_2\text{Pt}$

Pathway:

Cell Cycle/DNA Damage

Target:

DNA Alkylator/Crosslinker

Purity / Grade:

>98%

Solubility:

H₂O : 1 mg/mL (3.33 mM; Need ultrasonic and warming); DMF : 14.17 mg/mL (47.23 mM; Need ultrasonic and warming)

Alternative Names:

CDDP; cis-Diaminodichloroplatinum

Observed Molecular Weight:

300.05

Product Description

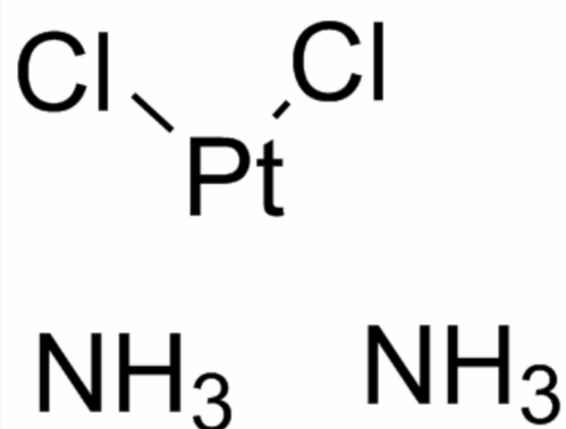
Cisplatin is a antineoplastic chemotherapy drug which works by cross-linking with **DNA** and causing DNA damage in cancer cells.

IC50 & Target: DNA Alkylator/Crosslinker^[1]

In Vitro: Cisplatin (CDDP) causes apoptosis of HeLa cells in a dose-dependent manner, with a concentration of 30 μM Cisplatin resulting in death of greater than 90% of the cell population by 24 h of treatment. The kinetics of Cisplatin-induced apoptosis are examined using a 30 μM concentration. Cisplatin Activates the MEK/ERK Signaling Pathway, 20 and 30 μM Cisplatin, both of which results in significant apoptosis, leads to strong activation of ERK^[1]. Cisplatin (50 μM) produces time-dependent apoptosis in renal proximal tubular cell (RPTCs), causing cell shrinkage, a 50-fold increase in caspase 3 activity, a 4-fold increase in phosphatidylserine externalization, and 5- and 15-fold increases in chromatin condensation and DNA hypodiploidy, respectively^[2].

In Vivo: In melanoma-bearing mice, Cisplatin (4 mg/kg B.W.) reduces the size and weight of the solid tumors, and HemoHIM supplementation with Cisplatin enhances the decrease of both the tumor size and weight^[3]. Cisplatin administration results in significant increases in the kidney weight as a percentage of the total body weight, urine volume, serum creatinine, and blood urea nitrogen

by about 132, 315, 797, and 556% in comparison with the control rats, respectively^[4].



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