

Product Specification Sheet

Product Name: Cisplatin

Catalog Number: C2488

Technical information:

Chemical Formula: $\text{H}_6\text{Cl}_2\text{N}_2\text{Pt}$

CAS #: 15663-27-1

Molecular Weight: 301.1

Purity: > 98%

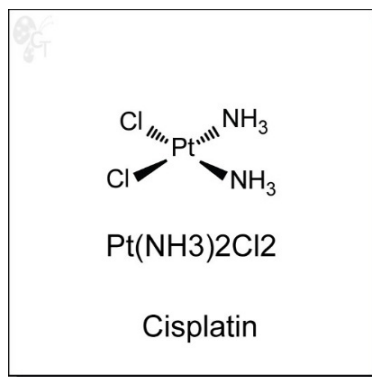
Appearance: Yellow solid

Solubility: Soluble in DMSO up to N/A

Chemical Name: cis-Diammineplatinum(II) dichloride, cis-Dichlorodiammine platinum(II), cis-Platinum(II) diammine dichloride, Cisplatin

Storage: Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.

Shelf Life: In the unopened package, powder is stable for 1 year and DMSO solution is stable for 6 months under proper storage condition.



Handling:

- To make 10 mM stock solution, add 0.332mL of DMSO for each mg of Cisplatin
- For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

Biological Activity: Cisplatin is an intravenously-administered platinum complex that induces cytotoxicity by interference with transcription and/or DNA replication mechanisms. Cisplatin bind preferentially to guanine, and damages tumors via induction of apoptosis. [1] DNA binding proteins recognize the topological distortion of DNA and initiate DNA damage repair, and if repair is not possible, apoptosis.

DNA adducts induced by cisplatin result in activation of several signal transduction pathways, such as ATR, p53, p73, and MAPK, leading to apoptosis. [2]

NSCLC and colon cancers are resistant to cisplatin, while others such as ovarian cancer acquire resistance over time. [3]

Reference:

1. Florea et al., Cisplatin as an Anti-Tumor Drug: Cellular Mechanisms of Activity, Drug Resistance and Induced Side Effects. *Cancers* 2011, 3, 1351-1371. Pubmed ID: 2072-6694
2. Siddik et al., Cisplatin: mode of cytotoxic action and molecular basis of resistance. *Oncogene*, 2003, 22, 7265-7279. Pubmed ID: 14576837
3. Alderden et al., *J. Chem. Ed.* 2006, 83(5), 728-734.

To reorder: <http://www.cellagentech.com/Cisplatin/>

For Technical Support: technical@cellagentech.com

Chemicals are sold for research use only, not for clinical or diagnostic use.